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Where Government Belongs in Matters of Health*

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TO paraphrase Voltaire: For any rational discussion we should first define the basic term. Here the basic term is "government". As this brief presentation refers chiefly to the United States of America, I will assume that it is still our desire to perpetuate the conceptions of government as defined or indicated by our Declaration of Independence, the Constitution—including the Bill of Rights, and the ideals of individual freedom, with equality of opportunity and responsibility, as expressed or implied in the recorded views of our leading statesmen and jurists from Washington and Marshall down.

If we are to perpetuate those ideals, the basic principle which guided us to such unparalleled achievement and happiness—including health—must be retained: namely, the principle that government is, within reason, for the protection of, but not for the support of the individual.

Should we approach every detail of government from this angle, our task would be quite simple. Then government, in matters of health as elsewhere, must be confined to measures of protection only, and within reason.

IT has been said by public health and welfare specialists, with increasing boldness of late, that our government owes everyone perfect health. Such a statement from a political demagogue would be ignored by any serious thinker. When used by a physician who heads a great Health Department in the United States of America it cries for prompt and emphatic refutation. In the first place, the mere statement carries its own absurdity. As we know, it is impossible of fulfilment. Health depends upon too many factors, most of which can be controlled only by the individual, if at all. But, even if such a service were possible, in the name of every principle that has made America admirable, perfect health, like the various factors that go to make up its attainment—such as good habits, food, clothing and a roof—under our government, must be earned by the individuals and private families making up our population. The government can and should protect its citizens only from reasonably preventable injurious influences over which the individual can have no control. Herein lies not only common sense but the very essence of Americanism—freedom from mass-slavery of any kind. Under the American system the larger part of social welfare, when needed, has been supplied by private charity. It is my belief that this wholesome habit should not be lessened by government encroachment. In the application of legitimate health measures by the government some instances will arise where welfare measures must be promptly applied to complete the task, but it is my contention that these instances should

* Read before the Society of Medical Jurisprudence, at the New York Academy of Medicine, Jan. 9, 1933.

be kept down to the smallest possible number and scope, rather than expanded as we have recently seen.

IN my childhood I often heard the saying "Root little pig or die." It was used without bitterness and in good humor. It expressed the moral and economic atmosphere prevalent in the state of Georgia, and general throughout the South at that time—1878 to 1893. Since then I have come to believe that this was the spiritual and material basis of life that nurtured the men who laid the foundations of our national character and government one hundred years earlier. By this familiar expression I knew, even in childhood, that whatever material comforts and advantages, even of bodily strength and health, I or my family would have could be attained only by our own efforts. Somehow "Root little pig or die" meant more than this. It meant that my government depended upon a fair measure of support from me for its success. What I would receive from it was mostly spiritual—negative in a material way. It stood between me and harmful interference—nothing more. That was sufficient for me to take pride in it and support it.

Not until I came to New York to study medicine, in 1893, did I begin to realize how many persons looked to their government—City, State or National—for some kind of material personal support. These were then confined to avowed politicians or close friends of politicians who were in much smaller percentage than now.

IN 1905 I began to help organize the first tuberculosis clinic of the City Health Department. I was then, and had been for some years, working in other clinics without compensation. So, for about a year, until economic necessity drove me to it, I made no inquiry concerning possible compensation for my Health Department work. In fact, not until—through competitive examination—I won an appointment which added several hours every day visiting contagious disease hospitals was I placed on the payroll.

Broadly, the functions of the Health Department were then confined to measures for recording vital statistics, the prevention of spread of disease and protection of the community from injurious nostrums, conditions and practices. This was when the Health Department was largely guided, in its policies, by the opinions and advice of highly representative private practitioners, bacteriologists, and teachers of medicine. No organized medical politics, leaders of organized groups, nor even general municipal politics had any special weight in Health Department activities. It possessed the confidence of the general medical profession, and led the world in many health protective measures.

ABOUT that time, 1906, rumblings of the great change in the relationship of citizen and government were first noticeable to me. Health officials and uplift or welfare specialists began to spread their theories and claimed accomplishments in the public press. Everyone who can read, see, or hear knows to what length this has advanced.

Perhaps to the detriment of my own material welfare I have continued to divide my study and work between public health and the private practice of medicine. But it is to this that I owe whatever ability I now have to see and understand the changes that have occurred.

The estimated normal per capita cost of the New York City Department of Health, exclusive of hospitals now in a different department, was in 1906, approximately twenty-five cents a year. Its functions and activities have expanded until now, when it would appear to be trying to relieve most children and their parents, not to mention private practitioners of medicine, of all responsibility for, not only disease, but the general body development. And, its normal per capita cost at the end of 1931, the last totals available when this article was written, was approximately eighty cents per annum—more than three times as much. Through all of these years, and for many years before, the City's death rate has diminished more or less steadily, but in the last ten years only about one twenty-eighth as rapidly as it did two decades ago; and furthermore, many other general changes have aided in reducing the entire national death rate.

I AM quite sure that these conditions have not been peculiar to New York City, which has always had one of the best Health Departments in the world. They merely illustrate a widespread failure to apply broad consideration and basic common sense in a special field. Such faults are inevitable when policies are directed solely by specialists, whose vision, like the rest of mankind, is usually limited by their life work.

Probably the most potent reason for a slower reduction of the death rate in recent years is that we are approaching an irreducible minimum. Most other factors are more or less speculative. In most explanations and predictions concerning the death rate and other phases of public health we see and hear the highest degree of confusion between fact and assumption. Some philosopher has rightly said that one of the finest and rarest attainments of the human mind is an ability to consistently distinguish fact from assumption. Certainly we physicians should strive for this attribute, as our excellence is in direct proportion to its attainment. Yet the public utterances of modern health officials show an increasing deficiency and disregard of this virtue. It is my belief that herein lies the chief basic cause of most of the errors in public health, welfare, and educational activities. One vicious result of these distortions of reason and knowledge has been the creation of wide public belief in the assumption that there is always a direct and consistent ratio between budget and benefit. Nothing could be farther from the truth. In New York City the dominant fact is that, when we were spending on public health measures only one-third as much as now the death rate was falling nearly twenty-eight times as fast. Therefore, the question naturally arises—why continue to expand effort and expense when they have become unnecessary or futile?

LONG study and mature thought have convinced me that there is no complete justification for all of this increase in activity and per capita cost. Some of the new activities of the last twenty-six years are probably desirable, some are overdone, and some are undesirable. The cost is too much. It will come down. Economic necessity will bring it down. We can do it gradually—not too gradually, but intelligently, if we will. If we narrowly try to keep it up it will fall down in confusion. Here broad knowledge and judgment are needed to bring us back to an even keel. It is no job for a specialist.

Although some specializing is essential for medicine's best service to humanity, there is now a general realization that it is being overdone. This is hopeful.

A health department is in a peculiar position. There never was and probably never will be a board in charge of city, state or national finances that would not respond promptly and liberally to any call to defray the cost of protection against an emergency in the way of threatened or actual epidemic or pestilence. This should

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Antineuritic Vitamin Deficiencies

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MUCH has been written about moderate and extensive antineuritic vitamin deficiencies. The results of prolonged vitamin B deficiency in pellagra and beriberi are well known. B_1 is the antineutitic factor and is protective against polyneuritis, while B_2 (spoken of as vitamin G) is thought of in connection with pellagra. B_3, B_4, and B_5 are supposed to be essential to growth. Vitamin B deficiency has some connection with gastrointestinal disorders.

Beriberi is the outstanding example of vitamin B deficiency. The characteristic symptoms are edema, multiple neuritis and cardiac weakness. Cecil states that experiments on fowls on a diet lacking the antineuritic vitamin show degenerative lesions in the peripheral nerves after seven days, but feeding experiments on human beings show that a depletion period of three months must elapse before clinical symptoms are found.

The early symptoms of beriberi are mild gastrointestinal disturbances, palpitation and malaise. This is later followed by a flaccid paralysis and muscular wasting.

SOME interesting experimental work is being done with vitamin B for certain spinal lesions. Many of these conditions, especially in old age, are indefinite and may be termed "disseminated sclerosis." At the moment the writer has several cases in aged persons, who have had an increasing weakness in the legs and were gradually becoming bedridden. Several of these patients, on prolonged use of vitamin B, have recovered to the extent that they are able to walk again and several have returned to work. Not enough experience, to be sure, to make any definite statements but it is safe to say that prolonged use of vitamin B is justifiable in aged patients (and many in middle life) who are showing indefinite symptoms suggesting a degenerative condition of the spinal cord. There has been no edema of the legs associated with these cases. In one instance, in a man aged 74, after a month on vitamin B extract, the Babinski sign disappeared. Most of these cases have been associated with mild gastrointestinal disorders.

If extreme deficiency will cause berberi, it is reasonable to presume that mild deficiencies will produce mild symptoms. A slight shortage of vitamin B will cause loss of appetite, weakness, loss of weight, anemia and depression of the circulation. Indigestion, constipation and colitis may follow. Many of these patients show mild nervous disorders, especially melancholia.

In infants, a lack of vitamin B may cause irritability and the infant may be classed as nervous. Many of these nervous manifestations disappear when an adequate amount of vitamin B is added to the diet.

IN childhood, nervousness is a problem. Volumes have been written about the nervous child; specialists have been called in to treat behavior problems and special nurses have been employed to deal with these difficult youngsters. Child guidance clinics study the nervous child's personality and behavior. The social worker deals with the problem and the psychologist studies the various angles of the case. Paranoid reactions, infantile behavior, hypochondriacal reactions, fear and worry, rebellion, and many other symptoms are noted. Of course, many things enter into the picture, such as heredity, environment, and physical defects, but there is evidence at hand to prove that many of these children are completely changed after the prolonged use of vitamin B.

One case will illustrate this. A boy, aged 11, was in Paris for two months. He did not like French food. On his return to this country he became quite nervous, could not sit without twisting, and had awkward, choreic movements. He was irritable, constipated, cried without any reason, and did not sleep well. After three weeks on vitamin B he was completely changed. The nervous symptoms entirely disappeared. Here we have no actual proof that vitamin B effected a cure but repeated observations on similar cases seem to indicate that vitamin B will completely change many of these youngsters.

Left untreated, these children go into adult life with a nervous instability that makes life miserable for themselves and for those about them. Many nervous women will be found in later life whose nervous instability is due to a lack of vitamin B in childhood, and in many instances this could be prevented.

A MAN, aged 40, had periodic attacks of hypochondria. There was no reason for it but the attacks came with increased frequency. After taking vitamin B extract for several months he is completely cured. Another patient, aged 35, was extremely nervous. He worried about his work constantly. After using vitamin B for several weeks he was completely cured and never worries about his work now.

Nervous patients, even at the age of 50, are often relieved of their symptoms after the prolonged use of vitamin B. It requires months to note any benefit but the cure seems to be permanent in many cases. The patient must be impressed that it is necessary to use the vitamin over a long period of time.

There is reason to believe that vitamin B is indicated in certain cases of myocardial weakness of unknown origin. Certainly if beriberi is characterized by cardiac weakness, mild deficiencies may have some effect on the heart muscle. Many of these patients who are nervous have gastrointestinal symptoms, a sallow, muddy complexion, and some shortness of breath, which symptoms disappear after vitamin B is given.

Cowgill (*J.A.M.A.*, June 25, 1932) points out that many marasmic babies have had their interest in food restored by the use of vitamin B. He states that the clinician should demand evidence that special concentrates really contain the antineuritic vitamin in sufficient amounts.

Wheat germ and brewers' yeast are good sources of vitamin B. Some of the foods containing large amounts of vitamin B are kidney, brain, liver, lentils, tomatoes, spinach and legumes. Milk is not a good source. Concentrates should be standardized and care must be taken that there is a large amount of B_1 and B_2 in the preparation. There is some evidence that B_2 as well as B_1 is necessary to improve nervous disorders.

SUMMARY

1. If extensive vitamin B deficiencies cause beriberi, surely a slight shortage may cause many minor symptoms.

2. There may be some association with spinal degenerative changes in old age and a prolonged deficiency of B_1 and B_2.

3. Many nervous children are completely changed after using vitamin B over a period of time.

4. Continued use of this vitamin is necessary to get results.

5. Many nervous patients in adult life are traced back to a lack of vitamin B in childhood.

6. There may be certain mental symptoms associated with a lack of vitamin B.

7. Some heart weaknesses may be benefited by vitamin B.

8. Wheat germ is a good source of vitamin B. Concentrates should be standarized and assurance given that a sufficient amount of B_1 and B_2 is contained in the preparation.

Where Government Belongs in Matters of Health

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lay upon us an attitude of restraint in the intervals between such times of danger.

NO matter how steeped in special study men become accumulating half-baked statistics, no matter how many of Nature's secrets are exposed, or forces harnessed, we will never change the fact that we are animals subject to basic traits within ourselves. One of these is that we make effort, according to our knowledge and ability, only in proportion to the necessities surrounding us.

In our post-war prosperity spree we appear to have lost the power of wise selection between long reliable methods and sophistic new proposals. Any new scheme for relieving personal responsibility has been eagerly adopted. Though steadily growing less popular, this wild scramble to scrap everything old, regardless of merit or cost, still goes on in some high places, even in matters of health and character building. Experience and sober thought both tell us that many of the old truths are as valid as they ever were. These can be retained and coordinated with whatever is both new and true. They need not and must not be discarded, if we are to really advance.

There is nothing finer or more inspiring than the generous and voluntary giving of their substance by the healthy for aid and protection of the less fortunate, and certainly the medical profession has earned a high place in this regard. But, on the other hand, to arbitrarily place upon the shoulders of the wise and strong an unreasonable burden, in a futile effort to salvage the more negligently inclined, is going too far, and, for the good of the race, there must be readjustment.

SOME, rationalizing their own lives, and others, timidly admitting prospective defeat, have said that "Whether we like it or not, socialized medicine is soon coming." Of them I would ask how, under our constitution, they propose to trample under foot the rights of physicians and leave others free? As I see it the thing is unthinkable. Of course, it is regrettable that a member of our profession in high office should compare American methods unfavorably with the actually distressful conditions now enforced in Russia.

I am convinced that, beyond accepted limits, the less government agencies encroach upon the functions and responsibilities of private physicians the higher will our profession rise in achievement and aggregate service to society.

Man now has more knowledge and less sense than at any other recorded time. Courageous selection and balance are our greatest needs today, and in no field more than in that of medicine. In the last thirty-five years I have seen the pendulum swing away from the old public confidence in the family doctor to his present eclipse. Both the lay public and our profession have lost something fine—spiritually, physically and economically—in this change. I have seen the public health office and officer play a part in helping to bring about this unhappy decadence. So, I believe it is their duty, and that now is the time, to lead in restoring the proper supremacy of the general practitioner.

565 Park Avenue.

Immunity and the Nervous System

The possibility that inflammatory and ulcerative lesions of the skin might be produced by suggestion, and perhaps intense mental concentration, has been canvassed, affirmed, and rejected for a very long time. Some of the evidence in its favour seems to be beyond reproach, nor does such a method of causation appear prima facie very unlikely to those who appreciate the influence of the mind on the body and are prepared to believe in the relationships in which the mode of connection between cause and effect is quite unknown. On the whole, however, serious workers have, perhaps naturally, kept clear of a topic where there is much uncertainty and without doubt not a little fraud and credulity. Nevertheless, Dr. S. Metalnikov, of the Pasteur Institute in Paris, has in recent years made a number of interesting experiments which may perhaps help to bring the whole question within the range of more exact knowledge; he has contributed a convenient summary in *Biological Reviews* for July 1932, and other papers by himself and his collaborators will be found in the *Annales de l'Institut Pasteur*. On the one hand, he has a variety of observations made on the caterpillar of the moth galleria, a convenient animal for the purpose, since it feeds on honeycomb and breeds all the year round in the laboratory. Many varieties of bacteria are pathogenic for the larva—e.g., Gaertner's bacillus—and the intact larvæ can be immunised against them by injecting a small dose of dead bacilli. This immunity is achieved equally well after destruction of the cerebral ganglia, the first or second thoracic, or one of the abdominal ganglia; it fails, however, if the third thoracic ganglion is cauterised, and Metalnikov therefore identifies that part of the nervous system with some controlling influence on the immunity reaction. In a later paper in the *Annales* for October he shows that the caterpillars will live for several weeks after a tight ligature has been tied round the middle of their length. If the anterior part of such a divided caterpillar is infected, it dies in 24 hours, and the posterior part survives three or four weeks; similarly, inoculation of the posterior part kills only half the animal. The separation between the two halves is therefore tolerably complete. In the same way each half may be immunised separately by vaccination. But if the anterior half is vaccinated, the posterior part is found to be also immune after four or five days so long as the ventral nerve-cord has been left intact; if this is interrupted the resistance does not spread from one part of the body to the other. This last experiment certainly seems to suggest that the action of the nervous system is direct and not through some effect it may have on the general economy of the animal. And on the other hand, Metalnikov has a collection of experiments designed to show that immunity reactions may be conditioned reflexes. Each day in rabbits for 20 or 30 days he associates an internal stimulus (the injection of dead cholera vibrios) with an external stimulus (warming or rubbing the ear or sounding a horn); thereafter, the external stimulus alone is found to be effective in rousing the characteristic responses—cellular changes in the peritoneum, alterations in the leucocytes in the blood, and the production of serum antibodies as the case may be. The results are unexpected but not incredible; Metalnikov seems at any rate to have made out a good enough case for the careful repetition of his work under strictly controlled conditions. He may have opened up the detailed experimental analysis of why a determination to get well is as important as a good nurse in deciding the outcome of illness.

—*The Lancet.*

The Successful Treatment of Hemorrhoids Without Operation

JOSEPH FRANKLIN MONTAGUE, M.D.
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DOCTORS in general practice throughout the community collectively see and treat, in some manner or other, more cases of hemorrhoids than any one rectal specialist. They are frequently asked the question, "Doctor, can hemorrhoids be treated without operation?" The usual response to that query is, most unfortunately, the prescription of a suppository, often without even the formality of a rectal examination. Such treatment is not treatment at all—it is *maltreatment*. Exactly how many cases of cancer of the rectum have been treated by suppositories is difficult to determine—dead men tell no tales! But enough of such instances have come to my notice to be convinced that routine suppository treatment is an abomination. Hemorrhoids are varicose veins of the rectum. Who would think of treating varicose veins of the leg by ointment? Suppository treatment of hemorrhoids is, after all, analogous.

There are available methods for the treatment of simple internal hemorrhoids which furnish an alternative to operation. One of these is the injection method. At first consideration, it appears to offer so many advantages over the operative method that one might wonder why the latter is ever used. In the first place, when this treatment is properly employed, there is none of the cutting, which is in itself abhorrent to the patient. Moreover, the patient need never absent himself from work so that from an economic viewpoint both the patient and his employer are less disturbed by the treatment than when an operation is performed. The injection treatment of hemorrhoids if properly administered in selected cases relieves the patient of the necessity for surgical operation and gives him a result which is as likely to be permanent as that of a surgical operation.

THE method is often condemned by those who have either not tried this method or are prejudiced by bad results that have come to their notice after injection treatment by quacks. But here an indictment must be brought against the state for allowing incompetent men to practice medicine rather than against the methods they use. It would be just as absurd for the general surgeon to refuse to use the knee-chest position because that too is employed by quacks. Almost any medical method if used carelessly or by incompetent men may produce bad results at times.

Upon considering the medical literature of the last decade upon the subject of non-surgical treatment of hemorrhoids and studying the collective opinion as to its value, we find ample support for the use of this method. Eminent surgeons in many countries throughout the world, including our own, have tried the method over a period of years and agree in general that in properly selected cases the injection treatment of hemorrhoids may rightfully be included in the therapeutic armamentarium of those physicians who have occasion to treat rectal diseases.

If it then be agreed that the qualified practitioner of medicine is justified in using any method of treatment through which he may reasonably expect to benefit his patient, then the following description of the injection method will be appropriate. Indeed, that the method is legitimate and capable of favorable results may be inferred from the fact that many members of the medical faculty request this particular treatment when so unfortunate as to be afflicted with hemorrhoids themselves.

I BELIEVE it is well to dispel any suspicion on the part of the reader that there is something mysterious about the injection treatment of hemorrhoids. The substances used are inordinately commonplace chemicals and no unattainable degree of skill is required for the proper injection. Indeed, the method is simplicity itself. All that are required are pure chemicals—as indeed we demand in other medicines—and a knowledge of the nature and structure of hemorrhoids. Any legitimate practitioner may easily obtain the one and readily acquire the other.

The Rationale of the Injection Treatment

THE theory of the injection treatment of hemorrhoids is as follows: The injection of a moderately irritant substance around the varicose hemorrhoidal venules which constitute a hemorrhoid will excite a productive inflammation in the adventitia or outer coat of the vein structure and in the areolar tissue which immediately surrounds it. This will lead to a gradual periphlebitis and a limited phlebitis. Contraction of the connective tissue thus produced induces a steady diminution of the calibre of the vein until at last complete obliteration of the vein results. The hemorrhoid thus is no longer distended with blood and as organization proceeds it becomes converted into a fibrous mass of tissue. Thus the hemorrhoid, a group of hollow vessels distended with blood, becomes converted into a solid mass of non-vascular structure and the hemorrhoid has been cured.

Selection of Cases

MORE important by far than any other detail in the injection treatment of hemorrhoids is the proper selection of cases. This is a prime requisite which must be satisfied if justice is to be done to the patient and to the method. Should we employ the method in an unsuitable case unpleasant and even serious complications may ensue. As such may be mentioned sloughing, gangrene, abscess, fistula formation, liver abscess or even septicemia. The termination therefore of faulty selection of cases is that we not only fail to cure the hemorrhoid but we run the risk of inflicting injury on our patient. Either or both of these possible results cause to be brought into disrepute a method which, if properly applied in appropriate cases, will give the most gratifying results.

A somewhat similar condition existed for a time when salvarsan was first introduced. It was used in almost every clinical condition known, sometimes with alleged good results, but time gradually established its positive

efficacy along the lines it was intended for and its entire lack of panaceal properties. So, too, with the injection of hemorrhoids—the method has its applications and these we should appreciate. It likewise has its limitations and these we should recognize.

Indications and Contraindictions

The injection treatment is indicated for use in only one type of hemorrhoids. Completely satisfactory results will attend its use in uncomplicated internal hemorrhoids. In no other type is its employment to be considered. In the early days of the method various other forms of hemorrhoids were experimented with but the consensus of experience, both past and present, is to the effect that only simple internal hemorrhoids should be treated by this method.

Preparation

THE idea of cleansing enemas prior to the treatment is grossly erroneous since this procedure is eminently adapted to stir up all manner of infective material in the colon, putting it in an aqueous suspension so that it may readily be conveyed to the minute break in the mucosa caused by the needle. The idea of cleansing cathartics is equally absurd though I know for a fact that there are many surgeons who use this as a routine procedure. To my mind it seems inexcusable to disturb the normal functioning of the entire intestinal tract in order to "clean" the lower 2½" to 3" of it. Particularly illogical does this appear when the ready accessibility of this area is considered. In my own practice I merely insert my proctoscope and by means of a few large cotton swabs thoroughly cleanse the mucosa of the mucus secretion which is usually found there. When the mucosa is rubbed dry I proceed to inject my solution confident that the area is quite as clean and sterile as it ever will be—which it must be realized is not very sterile at all. But regardless of what care is taken to "sterilize" the area, one may be sure that one minute after the procedure it will not be sterile. Some paint the area through which the injection is to be made with 3½% solution of iodine, but my experience with mere dryness has been quite as satisfactory. I have never had an infection result from the injection treatment.

Position

EITHER the knee-chest or the Sims position may be used while hemorrhoids are being injected. As a matter of fact any of the usual positions may be used but these are the positions of choice—the knee-chest for male patients and the Sims or left lateral position for female patients. After getting the male patient in knee-chest position, the speculum is inserted and the patient is then asked to rise to a knee-elbow position. This brings the hemorrhoids directly into view. In the instance of a female patient, the hemorrhoids may be brought well into view after inserting the speculum by placing a pillow under the patient's shoulders and having her bear down as if at stool.

Instruments

INJECTIONS may be made with any small syringe and needle but where it is possible to select the type of syringe the following suggestions will be of service. An all metal syringe is never to be used for the reason that one cannot be certain that it is clean. Thus while it may be boiled sterile yet there may be foreign particles in the barrel which will clog the needle or if small enough to pass through the needle they will be injected into the hemorrhoid, which of course, is undesirable A glass syringe, then, of 1½ or 2 cc. capacity is therefore preferable. The ordinary syringe used by dentists for inducing local anesthesia may be used with satisfaction. The only disadvantage of these syringes is their ready breakability, particularly during sterilization. To meet the disadvantages above mentioned as well as to combine the durability of the all metal syringe with the visibility of the all glass syringe, I have contrived the following arrangement which seems ideal for the injection treatment of hemorrhoids. The arrangement in brief is the utilization of the Cook syringe and carpule, found useful in many other injection procedures, such as local anesthesia. In the carpule (obtainable at almost any pharmacy) is the solution sterile and standardized according to one of three manufactured formulae. The carpules are of two sizes, 1 cc. and 5 cc. This carpule fits into the syringe like a cartridge fits into a gun. Fitting on to the syringe is an elbow extension needle. The immense convenience and economy of this outfit must be apparent for the reason that a standardized sterile solution is always ready for use, thus avoiding the trouble in preparing fresh solutions. Moreover, the solutions are tested as to stability, and being hermetically sealed remain unaltered. The economy of the plan is evident since no more solution is used than is needed and should only a portion of a carpule be used the remainder may be saved since the carpule seals itself upon removal (Fig. I.).

The outfit which the Cook laboratories have been kind enough to assemble and thus make easily available, together with an anal speculum either of the Brinkerhoff or the type shown herewith (Fig. 11.) and a few cotton applicators, are all the instruments necessary for the injection treatment of hemorrhoids. The use of my special rectal dressing tray and pan (Fig. III.) is a matter of convenience but not of necessity. It will be found useful to arrange the instruments and applicators on and the pan will also be found useful as a receptacle for soiled applicators.

Solutions

THOSE who avail themselves of the carpule outfit mentioned above have no need to be concerned about the detail of the composition, strength or preparation and sterilization of the solution. This is for the reason that the solutions furnished have been standardized and sterilized and are those suggested by conservative usage. For those, however, who wish to prepare their own solution the following information is given. Quinine and urea hydrochloride is used in a 5% aqueous solution to which is added adrenalin, three drops to the ounce; carbolic acid is used in 10% oily solution; cresylic acid in 10% strength in an equal mixture of glycerin and water.

These are simple solutions of definite and reasonable strength. I much prefer them to the more complicated formulae. My reason for this is that the use of more than one active drug in any one formula is unnecessary. Secondly, many of the other formulae are too strong for the purpose for which they are intended, i.e., to excite a mild chemical inflammation in the tissues. When we use a solution above 20% we are running the risk of producing chemical necrosis rather than productive inflammation. The present view of surgeons using this method is that 10% is quite strong enough. As a matter of further safeguard I use, in my own practice, cresylic acid in preference to carbolic acid, since although its properties are identical with carbolic its poisonous qual-

ities are much less. Quinine and urea hydrochloride is, of course, far less poisonous than either of these but in my opinion not as efficient. There is no practical risk involved in using a 10% solution of either cresylic or carbolic acid in this treatment.

The object of introducing any of these substances into the substance of a hemorrhoid is to excite a mild chemical inflammation sufficient to bring about the production of fibrin and consequent organization. It is, therefore, evident that our solutions must be strong enough to excite this mild degree of inflammation and yet they must not be so strong as to induce a localized tissue necrosis with consequent slough. This, in short, is the difference between the modern view of the injection treatment of hemorrhoids and the view of former days. A few years ago it was considered necessary to produce chemical necrosis and sloughing in order to obtain a good result. We now know that the absorption of the products of tissue decomposition is highly injurious if not absolutely dangerous to the patient. And clinical experience has proven that the obliteration of hemorrhoids may be safely accomplished by the use of what would formerly have been considered a weak solution, i.e., a 10% solution. The use of the weaker solution may require more time and take more treatments but is infinitely safer to work with. This, too, is in consonance with the conclusions now held by many other advocates of the method.

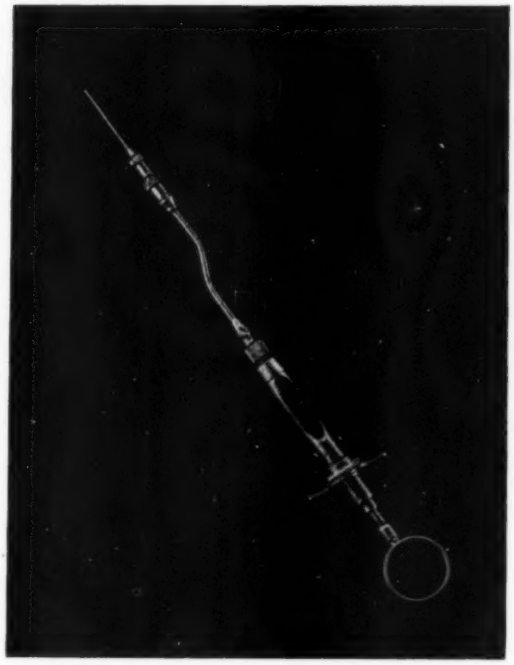

Fig. I. Hemorrhoid injection syringe.
Courtesy Cook Laboratories, Chicago, Ill.

Fig. II. Anoscope for the injection of hemorrhoids.
Courtesy Welch Alleyn Co., Auburn, N. Y.

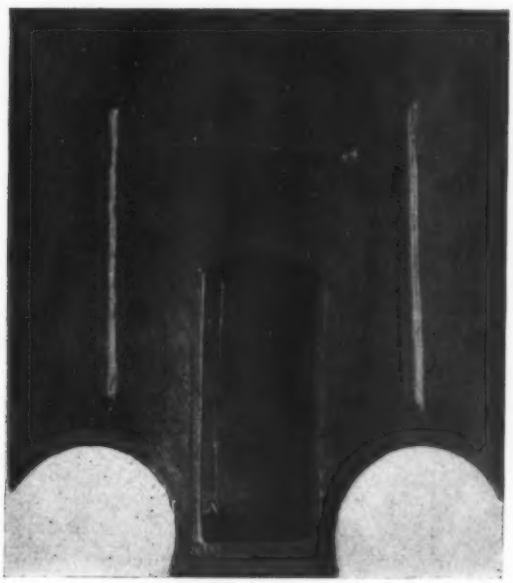

Fig. III. Rectal dressing tray.
Courtesy Frank S. Betz Co., Hammond, Ind.

Procedure

WITH the patient in the proper position a speculum is inserted and the hemorrhoids are brought into view. The field is surveyed and certain of the hemorrhoids are selected for injection.

It is well to have all the instruments, applicators, syringe and carpules arranged on a tray prior to arranging the patient on the table since the position is at best uncomfortable and to not a few embarrassing. Moreover, the dispatch with which the treatment is administered creates a favorable impression on the patient and relieves him of those anxious moments of anticipation which are more painful than the minute in which the treatment is actually given.

The needle is then plunged into the center of the pile to a depth of about 1 to 1½ cms. depending on the size of the hemorrhoid. With the needle at the center of the hemorrhoid, the solution is slowly injected. The amount to be injected varies of course with the solution used. The best guide as to the proper amount is the appear-

ance of the hemorrhoid. It is far safer to inject too little than to inject too much, since in the first instance the only result is the necessity of reinjecting at a later date, whereas in the latter instance painful and dangerous sloughing will occur, much to the patient's distress and to one's ultimate detriment.

It is carelessness on this point that is one of the reasons why recognition of the value of the method was late in arriving. One advantage of the Cook syringe I suggest is that there can be no aspirating of the injected solution back into the syringe, for the reason that the piston moves in only one direction, i.e., forward.

Immediate Results

THE immediate results, following the injection of hemorrhoids with any one of the three solutions recommended by the author, are as follows:

If the proper technique has been used no pain should follow immediately upon the injection of the fluid since proper procedure requires the introduction of this fluid above the area supplied by the sensory nerves. It is the normal course of events, however, for the injected hemorrhoid to swell a trifle following the injection and to give rise to a slight sense of fullness in the rectum. Occasionally dull pain is felt in this region. Ordinarily, it never amounts to anything severe. Not uncommonly, the swollen hemorrhoid prolapses through the anal orifice and in this event, especially in the presence of a spastic sphincter, moderate pain may result. However, if the prolapsed hemorrhoid be soon replaced, the pain immediately ceases. These are the chief immediate results incident to the injection treatment of hemorrhoids.

Ultimate Results

IN the course of a day or two, the hemorrhoid, which at first became swollen, shows a distinct shrinking and hardening of its tissues incident to the deposition of fibrin in the interstitial tissues. After a week, this fibrous mass has shrunk very considerably and at times is scarcely perceptible. In other cases, it may be perceptible as a palpable, cord-like structure. In either event, the hemorrhoid has ceased to exist and in its place is a small mass of fibrous tissue covered by mucosa.

After Care

THE after care of these cases is extremely simple and consists chiefly in aiding nature and avoiding unnecessary procedures. Thus we recommend to the patient the daily ingestion of at least one-half ounce of plain mineral oil-agar mixture in divided doses. This is best given in the dosage of one tablespoonful morning and evening after meals or upon arising and upon retiring. The object of this, which is merely a bland emulsion of inert oil with no chemical action on the intestines, is simply to lubricate the fecal mass in its passage through the rectal outlet. If this measure is not sufficient to induce a normal bowel movement every day, the use of castor oil as a cathartic has much to recommend it. It does not irritate the mucosa as does compound licorice powder nor does it induce pelvic congestion as aloes does. Given in the tasteless form now offered by many reputable pharmaceutical houses, this remedy can be given with assurance of results and without complaint on the part of the patient. It is well to caution the patients against straining at stool and if their occupation is of a laborious type, it is suggested that they avoid heavy lifting or any other procedure involving an increase in the abdominal pressure. I have also found it useful and comforting to the patient to suggest the injection of a mild antiseptic and anesthetic ointment like butesin picrate into the anal canal immediately prior to evacuation. It will thus be seen that the after care of these cases is extremely simple and I can assure you that it is only when an attempt is made to make it complicated, as, for instance, by the indiscriminate use of hot sitz baths, that any trouble results.

Conclusions

1. The injection method of treating hemorrhoids is a legitimate and efficacious method of treating properly selected cases of hemorrhoids. There is nothing unethical about the method.

2. By properly selected cases we mean simple internal hemorrhoids uncomplicated by infective or traumatic changes within the hemorrhoid itself or by coincident ano-rectal disease.

3. The preparation, procedure and after care in these cases are all simple and require no unattainable skill. Whatever skill is required consists mainly in the judgment of what cases are suitable for this particular treatment.

139 East 36th Street.

Diagnosis of Pernicious Anemia

1. An increase in size of the average erythrocyte, best indicated in terms of volume, is the most constant and characteristic finding in the blood in the presence of pernicious anemia. An increased volume index was found in every patient in this series.

2. Free hydrochloric acid is seldom, if ever, found in the gastric contents of a patient with idiopathic pernicious anemia. An achlorhydria was demonstrated in every one of the 152 patients in this series.

3. The mean corpuscular volume may be quite large even with a relatively high count; therefore it does not vary with the red cell count.

4. If the deficiency which is responsible for the disease is adequately supplied, the cells return to normal size. The first indication of a relapse or a lack of a sufficient quantity of the missing principle is an increase in the volume of the red cells.

5. Macrocytosis may occur in the presence of conditions other than pernicious anemia but was found only 9 times in a study of 411 patients and normal individuals.

6. Achlorhydria is a frequent finding in various clinical conditions, especially in the age period in which pernicious anemia is most common.

7. A combination of macrocytosis of the erythrocytes and achlorhydria is seldom if ever found, except in the presence of pernicious anemia.

8. The finding of an absence of free hydrochloric acid on gastric analysis and an increased mean corpuscular volume or plus volume index is a practically constant finding and one that is necessary for the diagnosis of active pernicious anemia; if demonstrated, it is almost pathognomonic of the disease.—Russel L. Haden, M.D., *J. A. M. A.*, Jan. 16, '32.

The Hazards of Intraperitoneal Injections

Samuel F. Ravenel, Greensboro, N. C. (*Journal A. M. A.*, Feb. 18, 1933), reports five cases illustrating some of the dangers encountered in using the intraperitoneal injections. They occurred in the comparatively limited experience of one man during the course of nine years. Abdominal distention is an absolute contraindication to intraperitoneal injection. The introduction of unmatched or incompatible blood into the peritoneal cavity is dangerous and unwarranted. Cross agglutination before each such transfusion is necessary, irrespective of whether or not the same donor previously has been used with success. In premature or young infants, intraperitoneal injection in the midline below the umbilicus may produce serious hemorrhage by wounding the "obliterated hypogastric artery." Intraperitoneal injection, while affording the most satisfactory method of administering fluids parenterally to infants, is not entirely devoid of danger. In one of the reported cases perforation of the intestine occurred during intraperitoneal injection of saline solution. In two instances, incompatible blood administered intraperitoneally produced violent local and general reactions. In two cases, serious hemorrhage resulted from puncture of the "obliterated" hypogastric artery during the course of intraperitoneal injections in young infants.

Treatment of Acute Gonococcal Urethritis In the Male*

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"IF medicine in general is an art, as it is said to be, then medicine as applied to the treatment of gonorrhea in particular is an art raised to the *nth* degree. This statement implies the difficulties with which one is beset who attempts to describe the treatment of a condition in which the number of 'cures' is legion but which is said to cure itself if left alone"—Jeck.[1] It is the purpose of this paper to consider the modern treatment of acute gonococcal urethritis in the male, from the standpoint of the general practitioner who is usually consulted by the patient, when the infection first manifests itself.

Inquiry among physicians who treat venereal diseases in men is sure to elicit the opinion that gonorrhea is on the increase in spite of the intensive educational program inaugurated in the army and navy since the late war. If we but analyze the statistics as to the prevalence of this condition and its ravages on the human race, especially among women, the prevention of gonorrhea is seen to be one of the most urgent needs of the age. The recent statistics on this subject show that "at least eighty per cent of all men in large cities contract gonorrhea at some time during their lives." If that further statement that "twenty per cent of all married men contract the disease and forty-five per cent of these infect their wives" has even a fraction of truth in it, the matter assumes a degree of importance for women that is even more appalling (P. S. Pelouze[2].) It has also been estimated "that sixty to eighty per cent of all the operations for diseases of the uterus and its adnexa are for lesions caused by the gonococcus." Even if we consider this estimate too high we know that annually thousands of women are operated on for infections of the uterus and adnexa caused by this organism and probably just as many women lead lives of complete or partial invalidism through the ravages of the gonococcus. Gonorrheal ophthalmia neonatorum is the greatest cause of blindness in infancy. It is estimated that fifty per cent of children in institutions for the blind are there because of this infection (E. D. Barringer, W. M. Brunet and L. I. Cargin[3].

THE treatment of acute gonococcal urethritis in the male includes the following subdivisions: prophylaxis, abortion, management; acute anterior disease without and with complications; the acute posterior condition without and with complications.

Prophylaxis: The only sure prophylaxis against venereal disease is continence. "Under present social conditions this seems to hold fewer devotees each year. The gradual emanicipation of youth has brought about a very intimate commingling of the sexes; and with the laxity of customs and the scanty attire of the modern woman the lure grows stronger and stronger as our so-called civilization advances and the inhibitions dwindle".[2]

The condom, unless accidentally ruptured during coitus, is a perfect safeguard against infection. The gonococcus is very quickly destroyed by a solution of soap if thoroughly and promptly used but if any of the gonococci have gained entrance to the urethra they are not affected by the external ablutions.

PREVENTION through antiseptics is of great value if used shortly after a suspicious intercourse. The usual errors made are that strong solutions are employed which damage the mucosa of the urethra and that the antiseptics are not used early enough. Their value is greatest in the first two hours and decreases rapidly as time intervenes. Before using the injections the patients should void and then gently fill the anterior urethra with the antiseptic. Solutions of argyrol ten per cent, protargol two per cent, or potassium permanganate 1:3000 are most commonly used and should be retained for five to ten minutes. In some patients a mild chemical urethritis with discharge may appear as a result of employing the antiseptics in the strengths advised and the patient should be informed so as not to become unduly alarmed if this occurs. E. G. Ballinger, O. F. Elder, and H. F. McDonald[4] state that the sealing-in method is almost certainly effective if used within 48 hours after exposure, and they still further state that except for one failure in twenty-three years that when employed within forty-eight hours after exposure this method has given perfect results as a prophylactic measure. One treatment, as a rule, is all that is required; when, however, there is a positive history of gonorrhea in the woman and the time elapsing has been more than twenty-four hours, one sealing-in treatment a day for two days has been advised.

Technic of Sealing Solutions in the Anterior Urethra: The patient empties his bladder and reclines. The meatus and glans penis are cleansed and dried. Not more than 25 minims of 5 per cent argyrol solution is injected. When injected into the urethra, the penis is clamped and the meatus is dried and U.S.P. collodion is applied with a camel's hair brush and allowed to dry. A condom with a pledget of cotton in it is rolled on the penis to protect the patient's clothing in case the collodion should leak. The patient is advised to take liquids sparingly until after the seal is removed. At the end of four or five hours the patient breaks the collodion, allows the solution to escape, removes any fragments of collodion from the glans penis, and then urinates. He should drink water freely for the rest of the day.

Abortive Treatment: In exceptional cases it is possible to abort a gonorrhea. Quoting from Keyes: "It is almost impossible to abort a first gonorrhea and often impossible to abort subsequent attacks. After experimenting with every method of aborting gonorrhea I ever heard of, it is my present conviction that the surest way to abort gonorrhea is not to try to abort it."[5]

IF the diagnosis of acute specific urethritis has been made it is advisable to give the patient a leaflet of instructions. It seems self-evident that the printed instructions should cover the following points:—The nature of the infection, the importance of the disease socially and personally, the tendency of the disease to spread and become chronic and the grave danger of infecting wives and members of the immediate family if the patient is still infectious. Particular instruction should be included as to cleanliness, support of the testicles as a preventive of epididymitis, and the danger

* From the Urological Services of the Brooklyn Hospital and Trinity Hospital.

to the eyes from contamination with the urethral pus. The diet should exclude ginger ale, alcohol, tea, coffee, spices and condiments, and during the acute stage absolute continence is essential with the avoidance of anything liable to induce sexual excitement. When the patient comes for the treatment of his initial gonorrhea he should be told that with cooperation on his part he can be cured; that an ordinary uncomplicated case takes from eight to ten weeks for cure and sometimes a little longer; that if he is single and remains under treatment until he is pronounced cured he can safely marry and may expect healthy children unless he is unfortunate enough to develop bilateral epididymitis while under treatment.

The treament of acute gonorrhea in the male can be best described by taking a few hypothetical cases and describing in detail the management and therapy of these cases as we see them in the office or clinic.

CASE I. This patient is a young man, aged 23, unmarried, who comes for advice and treatment because of a urethal discharge, frequency, dysuria and nocturia three. The patient has never had a previous urethral discharge. In his history he states that he has had the discharge for five days, that it came on four days after coitus and that two days after its appearance he consulted his corner druggist, who gave him a syringe and medicine to use for hand injections.

The patient has taken four injections a day, holding the medicine in the urethra for ten minutes at each injection, as he was very anxious "to dry up" the discharge as quickly as possible. But since he started his local treatment, the patient has had to void every hour during the day and two or three times at night, the discharge is more profuse and the burning, which was slight at first, is now severe.

Physical examination reveals a profuse, thick, greenish-yellow, purulent discharge, while the lips of the meatus are red, swollen and everted. Several slides are taken from the urethral discharge and the patient is then told to urinate into two glasses. The urine in the first glass is definitely cloudy, while that of the second glass is less cloudy or hazy. The examination of the slides with the Gramstain shows large numbers of pus cells containing numerous gram-negative intracellular diplococci. To eliminate gross infection of the prostrate and vesicles, these organs are examined per rectum and in this case they apparently feel normal, but under no circumstances should a prostatic smear be taken at this time. From all the evidence at hand we are dealing with an acute gonococcal urethritis involving the posterior urethra.

Since the patient has a hyperacute urethritis, he should not receive any local treatment at this time. Internally, sandalwood oil in capsules containing ten minims is given four times a day. If this should upset the digestion or produce pain in the kidney regions the sandalwood oil should be replaced by the time-honored "Lafayette Mixture" or by large doses of sodium bicarbonate (30 grains 4 times a day). As a rule the patient has very little difficulty while taking the oil of santal, his frequency and dysuria subside somewhat and there is a general improvement in his condition. Since the oil of santal is given primarily to soothe the inflamed mucous membrane it is advisable to limit the intake of fluids while taking this medication, otherwise it will appear too dilute in the urine to be of any decided value. On the other hand, if sodium bicarbonate is given internally, the fluid intake should be increased.

THE patient is given a leaflet of instructions and is advised to return for observation in three days, for in most cases it will take at least three days and usually longer before the acuteness of the condition begins to subside and it becomes safe to institute local treatment.

When the patient returns, his status is determined; his discharge is examined as to amount, slides are taken for examination, and he is instructed to urinate into two glasses. If he voids several times during the night and very frequently during the day and still has marked dysuria, his prostate should be examined per rectum. If the rectal examination is still negative and the urine voided into two glasses is still cloudy, he is advised to continue the internal medication and to return for further observation in three days.

When the patient is seen on his third visit, let us assume that the hoped-for progress has been made. The discharge is still profuse and contains numerous intracellular diplococci. The lips of the meatus are still somewhat inflamed, the second glass of urine is faintly hazy or clear, the patient voids every two to three hours during the day and only once at night and the burning on urination has stopped. In other words, the hyperacuteness of the condition has subsided, the patient has reached the stage when local treatment may be instituted, and he is now treated in the manner described for case II.

CASE II. This patient is a young man who had a previous attack of gonorrhea two years ago and had been pronounced cured. In the interim, he had coitus at regular intervals always using a condom, but six days before the discharge appeared, he had coitus and failed to avail himself of the security of wearing a condom. The discharge has been present for two days but the patient thought nothing of it at first, for the hyperacute symptoms which were present with the first attack are now lacking. The discharge is present but not so profuse, the lips are not so inflamed, there is but slight burning on urination and he is not obliged to get up at night to void.

The physical examination reveals a meatus which is but slightly inflamed and the discharge although purulent is not copious. A Gram stain of the secretion shows numerous intracellular diplococci. The urine voided into two glasses shows a hazy first urine with numerous shreds and a clear second urine. In the absence of hyperacute symptoms and a clear second urine local treatment may be instituted at once.

If the patient is able to make daily visits for treatment for the first two or three weeks, it is preferable for the physician to give all the treatments himself. The following plan of treatment has given me excellent results. The patient voids into two glasses and with a Janet-Frank syringe and Wheeler shield the anterior urethra is gently irrigated with a quart of warm 1:5000 potassium permanganate solution. The aim, certainly during the florid stage, is to gently fill the urethra until it feels as full as when urine is passing through it. In other words, no pressure greater than nature's own during the act of urination is either necessary or desirable. The urethra is allowed to free itself of any permanganate solution and is gently filled with a 5 per cent solution of argyrol which is retained from five to ten minutes. The patient is then given instructions as to diet and hygiene and asked to return the following day. This treatment is carried out daily for two to three weeks and if at this time the patient has no discharge treatments are given every forty-eight

hours. If there is a recurrence of the discharge at any time, daily treatments are resumed.

IF the patient is unable to visit his physician daily, he is instructed to take three urethral injections a day of ½ per cent protargol, using a bulb syringe and holding the solution in the urethra from five to ten minutes depending upon the amount of discomfort it gives him. I prefer protargol in cases where the patient treats himself. The patient comes in for observation at least twice a week and receives an irrigation of warm potassium permanganate solution followed by an injection of 5 per cent argyrol. If at one of these visits the second glass of urine is cloudy, the patient has to void very frequently both day and night, and has a burning sensation on urination, injections are immediately stopped and the patient is treated as case I until the hyperacute symptoms have subsided and the second urine has become practically clear.

WHICHEVER plan of treatment is adopted, it is continued until such time as it is felt that the patient has overcome his infection; that is, when the discharge has ceased, both glasses of urine are grossly clear and the urinary symptoms are nil. At this time he should receive no treatment for several days and is asked to collect on two glass slides any morning discharge that may appear. If, when he returns, there has been no visible evidence of the discharge, both specimens of urine are clear and his urinary sediment shows a few pus cells but no gonococci, his urethra is gently bougied in order to detect any infiltration. If no infiltration of the urethra is found, a No. 22 French sound is passed almost to the cut-off muscle. He is given slides and asked to return in three days. If he has not seen any urethral discharge, a smear is obtained by inserting a small cotton swab into the urethra. If the passing of the sound has caused the discharge to reappear, irrigations and injections are resumed once more. If no discharge has reappeared, or the smear obtained on the swab from the urethra shows a few scattered leucocytes and no gonococci and both specimens of urine are clear except for a few shreds, a No. 26 French sound is gently passed to the cut-off muscle, slides are given as before and the patient asked to return in two or three days. It is advisable not to pass any instrument into the urethra until it is felt reasonably certain that the gonococcus is no longer present. Sounds are usually passed at this stage for two reasons: primarily to stir up any latent infection and secondarily as a prophylactic measure against stricture formation. If the patient's condition is not influenced by the passing of the sound, it is then advisable to examine the prostate and vesicles even though the patient has not had any symptoms referable to a posterior urethritis or prostatitis; because we know that a gonorrhea may extend into the posterior urethra without the doctor or the patient knowing of it at the time. The prostate and vesicles are gently massaged and if possible a smear is obtained which should be examined for pus and organisms. If these organs harbor the gonococcus the discharge will invariably return and irrigations and injections will have to be resumed. If no infection is found in these organs, the patient's blood is taken for a gonorrheal complement fixation test, he is permitted a more liberal diet, also to drink a glass or two of beer or wine, but is advised not to have sexual intercourse. The patient is told to return in one week if his condition remains the same.

WHEN the patient returns at the end of one week of probation which has passed with no ill effects, and the blood test for gonorrhea is negative, the final tests of cure are then made. Another smear from the prostate and vesicles is taken and examined for pus and gonococci. A curved sound, No. 26 French, is passed into the bladder. For the next two days the patient is examined before voiding his early morning urine. The discharge, if present, is collected on a glass slide. If no visible discharge is present, a swab is introduced into the urethra and the discharge so obtained is transferred to a slide. If both smears are negative for pus and gonococci, as well as the prostatic smear, and the urine is clear (although it may contain a few shreds), the patient is told that he is probably cured. He is told not to indulge in coitus for at least 2 or 3 months without a condom. If his gonorrhea does not reappear in that time it probably will not recur.

In case I, we are dealing with an acute antero-posterior urethritis and probably a prostatitis. While the symptoms are hyperacute, internal medication is indicated until such time as there is no longer any urgency, frequency of urination, or tenesmus, and until the cloudy second urine becomes faintly hazy or clear. At that time local treatment is instituted as in case II, and no attempt is made to attack the acute posterior urethritis. Wolbarst[6] believes that "the best way to treat acute gonorrheal posterior urethritis is to leave it alone." This has been my plan of procedure for at least eighteen years and I have had no reason to change it. In other words, no effort or attempt is made to reach the posterior urethra with injections or irrigations of any kind. The daily anterior urethral injections of protargol are continued until the acute stage has passed. The following picture is now present: There is little, if any, meatal discharge and the discharge if present contains a moderate number of pus cells but no gonococci; the first glass of urine shows only a faint haze or only a few shreds; the second glass of urine is clear or only slightly hazy; there are no subjective symptoms.

In some cases, even if the patient has taken excellent care of himself, the second urine remains persistently hazy; if the case should come to a standstill, it is then advisable to gently palpate the prostate and vesicles.

IN the prostate and vesicles we have the most ideal conditions for prolonged gonococcal colonization and, unless we make an effort to eradicate the infection in these organs, the disease will linger here for great periods of time. Rectal palpation will show that the gland is somewhat enlarged and has a boggy feel. The expressed secretion of the prostate will usually show, on microscopical examination, pus varying from a small to a fairly large amount and usually in clumps. Bacteria are sometimes present in great numbers. If no pus is present, prostatitis can be excluded. In some cases no pus is obtained at the first massage, the secretion being exclusively from the normal portion of the gland. If the diagnosis of prostatitis has been made the prostate should be massaged not oftener than twice a week and only for forty to forty-five seconds at each sitting. In giving these treatments the prostate and seminal vesicles should be gently stroked from above downwards, leaving the midline until the last, as it is the most sensitive area. At first, these strokes should be very gentle, with a gradual increase of the pressure as the gland becomes less sensitive, but the pres-

sure should never be severe enough to cause much pain to the patient. If the gland contains much pus, there will be a recurrence of the discharge following the first few massages. If this occurs, treatment to the prostate should be stopped and the patient put on internal medication, injections and irrigations until the reaction subsides, when prostatic massages may be resumed. On massage alone, the patient's urine will at times become clear. If the prostatic secretion contains a large amount of pus, it usually takes from three to six months before it is possible to obtain 2 or 3 normal smears.

When the prostate begins to diminish in size and the smear shows a decrease in the number of pus cells, it is then advisable to examine the urethra for stricture; if one or more infiltrations of the urethra are detected, sounds should be passed every five to seven days as described in Case II—starting with No. 20-22 French. After the sound has been withdrawn, the urethra should be irrigated with a solution of warm potassium permanganate 1:5000 or neutral acriflavine 1:5000. When it is possible to pass a curved sound into the blader without marked reaction do so, but before introducing the instrument, irrigate the anterior urethra with the permanganate or acriflavine solution, gently pass a small rubber catheter into the bladder, empty it of its contents and then fill the bladder with the antiseptic solution. The patient empties his bladder after the sound has been withdrawn. If a stricture is present, dilatations of the urethra should be continued until curved sounds Nos. 28-30 can be readily passed.

PATIENTS will be encountered in whom, after the prostate has been massaged for several months, the microscopical examination of the prostatic secretion still shows pus in large clumps. In these cases a rest period of 4-6 weeks without any treatment is indicated. A second course of prostatic massages usually results in obtaining a definite improvement in the prostatic infection.

With the treatment outlined, in about three to four months the following picture is present. The discharge is entirely absent or is only present as a watery drop on pressure in the morning; both specimens of urine are clear, with a few shreds in the first glass; the patient has no complaints whatsoever. We are now ready to determine whether the patient is still infectious. After the passage of sounds the urethral smears should be examined from time to time and the absence of gonococci noted. This indicates that there are no foci in the urethra harboring the gonococci. While smears of the prostate and vesicles have been taken at intervals of three to four weeks to determine the amount of pus present, gonococci have not been found after several thorough examinations.

The patient is then told to return in one week, in the meantime receiving no treatment. He is advised to drink and eat the foods interdicted at the outset of his infection but is advised not to have coitus. If, on his return, there has been no recurrence of discharge and both specimens of urine are clear he receives the final check-up. The urethral smear is examined for pus and gonococci, the prostatic and vesicular secretions are also examined for pus and gonococci, cultures of these secretions are also taken, and if possible a condom specimen is examined for the presence of gonococci. If the urethral smear shows an occasional leucocyte, and the prostatic and vesicular secretions show pus varying from a few pus cells to a moderate amount but not in clumps and the absence of gonococci on smear and culture, and a gonorrheal complement fixation test is negative, a cure has been accomplished. The patient should nevertheless be instructed to have no sexual intercourse for three months without using a condom.

THE procedures employed in the treatment of the mild acute gonococcal urethritis have been described in detail in the two cases just cited. Complications of acute anterior gonococcal urethritis are the next topic and are, fortunately, rather trivial in character.

Hyperacute urethritis has been discussed in the treatment of Case I.

Extreme edema of the prepuce is due to lymphostasis and inflammatory swelling and is treated by heat (to tolerance) in penile or sitz baths, and by subpreputial irrigations with warm potassium permanganate solution 1:5000.

Balanoposthitis is apt to occur in men with a long and tight foreskin and particularly in those of uncleanly habits. The treatment consists in cleanliness, the use of a dusting powder (calomel and bismuth) and preventing contact of the opposing surfaces of the mucous membrane by means of gauze packed between the foreskin and glans.

Phimosis should be treated by soaking the penis in hot water and by subpreputial irrigations of potassium permanganate 1-5000 with a flat-billed Taylor syringe. If the swelling and edema persist, a dorsal slit of the prepuce is indicated which is later followed by a circumcision.

Paraphimosis exists when the prepuce is retracted behind the corona and cannot be replaced. An attempt should be made to reduce the prepuce. If it is impossible to accomplish this or if the glans looks gangrenous, the constricting band should be incised on the dorsum and the reduction can then be effected easily.

FOLLICULAR *Abscess and Cowperitis* are practically never seen when the urethral calibre is normal and the canal has not been subjected to high pressure injections or early resort to instruments. If the purulent collection points towards the urethra it may be incised through a urethroscope. But if the abscess invades the skin and softening occurs, the follicles should be opened and packed with iodoform gauze. They usually heal kindly from the bottom. When there are both internal and external openings, it is advisable to insert a retention catheter into the bladder, no urine being allowed to escape through the artificial opening. Fistulae at times heal spontaneously; if not a plastic operation is indicated.

Lymphangitis occurs in a small percentage of gonorrheal cases. Cleanliness and the avoidance of dressings which prevent the escape of pus from the urethra are the prophylactic measures to be employed.

Lymphadenitis or Bubo is a rare complication of gonorrhea. The glands rarely suppurate, but usually undergo resolution. The treatment consists of rest in bed and the application of heat and compression. If suppuration occurs, it should be treated as a bubo.

The complications of acute posterior gonococcal urethritis are next in order for attention, but cover so vast a field that a lengthy paper could be written on this subject alone.

Acute Posterior Urethritis and its associated prostatitis are due to extension of the inflammation by continuity of surface, or by forcing the infection back by improper treatment; the management of these conditions has been discussed in outlining treatments for Cases I and II.

PARENCHYMATOUS Prostatitis (Prostatic Abscess) may be overlooked at first for in its symptomatology it resembles a posterior urethritis. The diagnosis can be made only on rectal examination. The prostate feels enlarged, tense and painful. The diagnosis should be made long before fluctuation is detected, for if fluctuation is present, it shows that probably the whole of one lobe has been transformed into an abscess cavity. The treatment consists in rest in bed, capsules of sandalwood oil—10 minims four times a day, and opium and belladonna suppositories for pain and tenesmus. Hot sitz-baths from twenty to thirty minutes twice a day or hot rectal irrigations, two or three times a day, are always called for. In the presence of retention of urine the anterior urethra should be irrigated with an antiseptic solution and a soft rubber catheter introduced into the bladder. If it is difficult to introduce the catheter every eight hours or the patient has considerable pain during its introduction, it may be tied in and left in situ for several days until the acute symptoms subside. The process may terminate by resolution, by rupturing into the urethra or rectum, by rupturing into the periprostatic tissue causing an ischiorectal abscess, or by passing on to chronic prostatitis. If there is no tendency for the abscess to rupture into the urethra and the patient continues to have chills and fever and is septic, or the retention persists, the abscess should be evacuated by a perineal incision.

Seminal Vesiculitis—Acute inflammation of the seminal vesicles is characterized by practically the same symptoms as acute posterior urethritis and prostatitis. The diagnosis is made on rectal examination, which discloses a hot, tender, sausagelike tumor in the region of the inflamed vesicle. The treatment is similar to that of acute parenchymatous prostatitis. The inflammation usually terminates in resolution, but may rupture into the ischiorectal fossa, the rectum or the peritoneum, or the disease may pass into the chronic state.

Acute Epididymitis is caused by the passage of gonococci from the posterior urethra to the epididymis by way of the seminal vesicles and vas deferens.

PROPHYLAXIS—No metal instrument should be introduced into the urethra during the acute stage of gonorrhea and the patient should be instructed to wear a suspensory bandage and not to indulge in strenuous physical exercise during the existence of posterior urethritis, especially if the bladder is full.

Treatment—It is advisable to put the patient to bed as soon as the diagnosis has been made and procure proper elevation of the testicle by means of a tightly fitting athletic jock-strap. In more severe cases an Alexander bandage as used at Bellevue Hospital or a double spica bandage properly applied will do better. In the cases where the double spica or Alexander bandage is properly applied no further relief of pain is usually required. Where the jock-strap is used to support the testicle, wet dressings of aluminum acetate or a solution of magnesium sulphate can be employed. Some patients find greater relief with the ice-bag than with the application of heat. In the subacute stage, 10 per cent ichthyol ointment or an ointment containing ichthyol, belladonna and mercury may be employed to stimulate absorption. In cases with considerable effusion into the tunica vaginalis, the tension may be relieved by withdrawing the fluid with an aspirating needle. Sodium iodide in 20 cc. ampoules containing 31 grains should be given intravenously every 2 or 3 days until four doses have been administered. This apparently aids in the absorption of the infiltration of the epididymis. Mixed gonococcal vaccine may be administered in small doses every third day. The treatment of this complication by diathermy has been advocated but it should be kept in mind that there is the possibility of diathermy causing atrophy of the testicle and therefore it should be used with great caution. The operative treatment of this condition is reserved for patients whose temperature remains persistently above 102 F. and for those cases where the inflammatory reaction is so severe that, in spite of large doses of morphine or its derivatives, it is impossible to control the pain. Most cases improve under conservative treatment. After the acute inflammation has subsided the patient should wear a jock-strap or a suspensory. Local treatment of the posterior urethra and prostate should not be resumed until all tenderness of the epididymis has disappeared.

Cystitis is an extension into the bladder of the infection from the posterior urethra. The inflammation rarely spreads far from the internal orifice of the urethra, being usually limited rather sharply to the trigone. This condition demands about the same treatment as the intense posterior urethritis.

Pyelonephritis is a rare complication and is seen during the course of a severe gonorrhea; it is very rarely due to the gonococcus but is usually due to a staphylococcus or colon bacillus. True gonococcus pyelonephritis is usually mild but may be tenacious. It is best treated by pelvic lavage with 25 per cent argyrol solution or ½ per cent solution of silver nitrate.

Peritonitis—Pelvic peritonitis is as rare a complication in the male as it is common in the female. The inflammation is due to a vesiculitis or deferentitis. Its symptoms are the classic ones of pelvic peritonitis.

Special Considerations

There are a few points which have not been brought out in outlining the treatment of acute cases which are of importance in the examination and further treatment of the gonorrheal patient.

They are (1) The two-glass test. (2) The prostatic secretion. (3) The gonorrheal complement fixation test. (4) The small meatus. (5) The long, tight prepuce. (6) Internal medication. (7) Mixed gonococcal vaccine.

(1) The Two-Glass Test. If the urinary bladder is full of clear urine and the patient voids two or three ounces into the first glass and the remainder into the second glass, the first glass will wash out any pus or shreds that may be present in the anterior and posterior urethrae. If there is a small quantity of pus in the anterior or posterior urethra or in both, the first glass of urine will be hazy or cloudy while the second urine will be clear. On the other hand, if there is a severe posterior urethritis with the production of a large amount of pus between urinations, this pus will drain into the bladder, forcing its way through the weak internal sphincter so that the clear urine in the bladder will become purulent from admixture with this pus, resulting in a hazy or cloudy urine. Now when the patient voids, the first glass of urine would therefore contain the hazy or cloudy urine from the bladder plus the washings of pus and shreds from the entire urethra, while the second glass would be cloudy or hazy from the pus that had passed into the bladder from the posterior urethra and from that due to the trigonal infection. As soon as the trigonal infection and severe posterior urethritis subside, the second glass of urine will again become clear, but this does not signify that the posterior urethra is not still infected. Therefore, the appearance of the second glass depends upon the amount of pus formed in the posterior urethra between

urinations. This test to be of value requires that the patient retain his urine for two hours and void at least 2 or 3 ounces into the first glass.

(2) The Prostatic Secretion. As a rule, it is not difficult to obtain the prostatic and vesicular secretions for examination, unless the patient has had frequent coitus or seminal emissions or the prostatic ducts are plugged with detritus. If after gentle but thorough massage no secretion can be obtained, the patient should be advised to drink a few glasses of water and encouraged to urinate as soon as possible. The urine thus obtained is examined for pus and organisms.

IT is not possible to state that a prostate gland is not infected on rectal palpation alone. I have seen patients who voided crystal clear urine and whose prostate on rectal palpation felt normal but infection was demonstrated on microscopical examination of the prostatic secretion. I believe that a large number of infections in women are due to the fact that the prostate has been considered non-infectious on rectal palpation alone. After a prostatitis has lasted for several months, in the majority of cases, even in the absence of scientific treatment, it is impossible to find the gonococci, as they have been replaced by secondary invaders. In some cases of long standing, the gonococcus can be found only after a diligent search. Notthaft[7] states that the gonococci disappear from the prostate always within three years, often within eighteen months. Neisser, Finger, Frank, Wossidlo, Jodassohn, Goldberger, and others hold the same view. Keyes believes this viewpoint may be extended to include all the urethral glands and concludes that the "rule is almost without exception that a chronic gonococcic urethritis ceases to show gonococci in its secretion within three to six months of the beginning of intelligent local treatment." While the diagnosis of prostatitis is made on the finding of pus in the prostatic secretion, there are quite a number of patients who have a definite prostatitis in whom no history of a previous gonococcal infection can be obtained, but this type of infection of the prostate is associated with distant foci of infection in the sinuses, teeth, tonsils, appendix or gall-bladder. Where the prostatic secretion is examined to determine the infectivity of this organ, one or two smears that appear normal should not be considered sufficient evidence to exclude the prostate as a focus, for further smears may reveal pus in large amounts which originated from a deeper focus of suppuration and which was not emptied into the urethra on the initial examination. A prostate may be considered infected when the secretion shows more than 5 or 6 leucocytes to 1/6 inch field. A large number of pus cells, scattered over the microscopic field, indicates fair drainage, while pus cells in large clumps indicate poor drainage. As the prostatic infection improves the leucocytes decrease in number while the lecithin bodies shows a corresponding increase. The search of stained prostatic secretions for bacteria is not always very satisfactory. The culture of the prostatic secretion or that of the condom specimen is usually a simple matter and if the gonococci cannot be obtained on two examinations we can feel fairly certain that the prostate is non-infectious even though pus may be present.

(3) Gonorrheal Complement Fixation Test—This test is absolutely specific for the gonococcus. A positive reaction always indicates a gonococcal infection somewhere in the body except when the serum has been obtained from an individual who has recently received gonococcic vaccine or has just recovered from a gonorrheal infection and the immune bodies have not yet been eliminated. The test is of value in a case of suspected gonorrheal infection in which the gonococcus cannot be identified on smear or culture. In anterior infections the test is negative and it will not become positive unless the infection has spread to the posterior urethra and prostate. When a positive reaction has been obtained this will remain positive for several weeks or months after the patient is clinically cured. But if the patient is really cured, this test taken at intervals becomes less and less positive until a negative test is obtained indicating a definite cure.

(4) A Small Meatus is at times responsible for perpetuating a urethritis. If the meatus is pin-point in size, it prevents the urethra from completely emptying itself following urination; a few drops of urine remain behind in the fossa navicularis, decompose and cause a chronic inflammation of the mucous membrane. If the meatus is small and will not admit at least a No. 26 French bougie it should be enlarged. This can be done as soon as the abnormality is detected and should not be delayed until the time arrives to pass sounds and bougies into the urethra.

(5) A Long, Tight Prepuce, if difficult to retract, interferes with urethral drainage and is at times responsible for the chronicity of a urethritis. In some cases urethral irrigations and injections cannot be given due to the tight, small opening of the prepuce. Even in the presence of an acute urethritis it is advisable to perform a circumcision, but if this is not feasible a dorsal slit should be made so that proper drainage can be established and proper treatment instituted.

(6) Internal Medication in Acute Urethritis—Internal medication per se is of no value in destroying the gonococcus and should be prescribed only to combat definite symptoms such as dysuria, frequency, etc. Urinary antiseptics such as urotropin have no recognizable influence upon urethral inflammation and in the case of this drug it is necessary that some retention of urine be present in order that the resulting formaldehyde may accomplish its function and also that the urine be acid before formaldehyde is liberated. Urotropin should therefore never be prescribed while the patient is taking an alkali.

(7) Gonococcal Vaccines. The gonococcal mixed vaccine is of definite value in certain cases of gonorrhea. In acute or subacute gonorrhea where the case is at a standstill and in patients with hyeracute symptoms, small doses of vaccine given at intervals of 2 or 3 days are of decided benefit to the patient and help ameliorate the symptoms. In the cases that continue in a stationary stage for some time, small doses of vaccine will supply a required immunity stimulant that will cause a definite improvement in the progress of the case. The initial dose is 0.15 cc. and this is gradually increased to 0.3 cc. Usually four doses are given. Vaccines are helpful in the treatment of gonorrheal metastatic infections, particularly at the very earliest signs of joint involvement, and if used early enough multiple arthritis will be a rare complication. The amounts of vaccine suggested are based upon the standard vaccine dilutions of 1,000,000,000 gonococci to the cubic centimeter.

A Résumé of Newer Methods and Drugs in the Treatment of Acute Gonorrhea

In the treatment of this condition as outlined in this paper, there has not been mentioned any new method of treatment except the time-honored methods and drugs which have been in use for many years. Hardly a week passes but that somebody advances a new drug or treatment which supposedly will revolutionize the

treatment of gonorrhea. But the majority of these when put to the acid test are found wanting and are therefore thrown into the discard in a little while.

Diathermy is one of the newer forms of treatment about which much has been written. It was formerly supposed that the gonococcus is quickly killed by a temperature of 106 F. and many attempts have been made to cure gonorrhea by the general or local elevation of tissue temperature. The fact that the gonococcus in culture will survive 30 minutes at a temperature of 113 F. gives little promise of cure through direct killing of gonococci in the tissues. Some observers claim very good results in the treatment of acute anterior and posterior urethritis by the use of diathermy. I have observed several acute cases that have been treated with this modality and have not noticed as good results by this method as with the treatment which we commonly employ. I have had satisfactory results in acute prostatitis and acute posterior urethritis with hot rectal irrigations and hot sitz baths which depend upon the heat for their favorable action. Belfield has shown that diathermy at times produces atony of the testes in rabbits and therefore it should be used with great caution in the human being.

Deep X-Ray therapy has been used in the treatment of the complications of gonorrhea. Dr. Frank Liberson[8] summarizes his results as follows: "Deep X-ray therapy in the treatment of the various complications of gonorrhea in 119 males was studied over a period of six and one-half years with special consideration for recurrences and for comparison with untreated control groups. In the order of efficacy, X-ray therapy appears uniformly effective in the painful heel due to periosteal spur; it has a limited field of usefulness in the treatment of refractory gonorrheal joint complications, especially for the relief of pain; but in gonorrheal epididymitis, adenitis, and urethritis, the results were not significant.

IN the hypothetical cases described, protargol was mentioned as the injection in the cases treated by the patient himself. When results are not obtained with the strong silver protein and when the patient is unable to come for daily treatment, injections of acriflavine 1-5000 should be employed. It should be used twice daily and when it works well it checks the discharge quicker than any other urethral antiseptic that I have employed. Its use should not be continued longer than a week or ten days, for it has a tendency to cause irritation in the urethra, and if injections are then continued with this drug an infiltration of the urethra will result. When a patient has shown definite improvement from its use after seven to ten days, if further injections are indicated it is a good plan to change the medication to strong silver protein.

Dr. Russell D. Herrold[9] has used calcium gluconate in the treatment of acute complications of gonorrhea and reports favorable results from its use. He had six patients with acute gonococcal epididymitis. There was an average complete disability of less than two days. He also noted that there was less permanent infiltration of the epididymis if sufficient calcium gluconate was used than is seen with the routine treatment now employed. The average treatment has been daily intravenous injections of 10 cc. for three to four days, two or three more injections on alternate days, and then two a week, till about the end of the third or fourth week. The minimum number of injections was six and the maximum twelve. He also noticed a decidedly beneficial effect in four cases of acute prostatitis with a favorable influence on terminal hematuria and pain. There was a noticeable decrease of the acute swelling. He also obtained good results in arthritis, adenitis and lymphangitis. He concludes that the use of calcium gluconate should not displace recognized measures of value but further observation should be made to define more accurately its exact place in the treatment of acute infections of closed or partially closed cavities.

Summary

(1) The treatment of acute gonorrhea in the male has not materially changed in the past fifteen years. Several drugs have been advocated from time to time but results did not justify their further use. Strong silver protein and weak silver protein are the mainstays of our present treatment. In a certain number of cases injections of acriflavine checks the discharge quicker than any other urethral antiseptic but it causes definite infiltration of the urethra if used for several weeks.

2) Cases with hyperacute symptoms should receive no local treatment.

(3) The small meatus and tight prepuce are factors in prolonging a urethritis.

(4) Internal medications has no effect on the gonococcus but is of value in relieving symptoms.

(5) Cultures of the prostatic secretion and of the condom specimen are of value in determining a cure, especially in cases where it is impossible to eliminate the prostatic infection.

(6) Vaccines are of value in the treatment of gonorrheal metastatic infections, in hyperacute cases and in cases that continue in a stationary stage for some time.

(7) The status of diathermy, deep X-ray therapy and the use of calcium gluconate in the complications of acute gonococcal urethritis are outlined.

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Mental Deficiency

R. J. A. Berry, who is Director of Medical Services, Stoke Park Colony, Stapleton, near Bristol, has recently conducted, in conjunction with the medical staff of his institution, a co-operative examination of a group of 162 adult feeble-minded female inmates of the colony, in order to ascertain first the facts, and secondly the presence of any causative factor for the mental condition removable by medical care and treatment. The investigation included an examination of the physical and mental characteristics, medical examination, neurological examination, examination of the eye, ear, nose and throat, X-ray examination of the skull, some psychological experiments, and observations on the general behaviour and social reactions. Details of parentage and familial relationships were available in 157 cases, with specific information in 55 cases of the presence or otherwise of mental disorder or deficiency in the parents or blood relations. In these 55 cases there was direct and unequivocal evidence of the hereditary origin of the condition in 46 cases, and strong presumptive evidence of the same in nine cases. This investigation seems to suggest, if not to prove, that mental deficiency is a manifestation of improper development and not of disease, so that the problem becomes one of preventive medicine, eugenics and embryology rather than of curative medicine.—(*Bristol Medico-Chirurgical Journal*, Autumn, 1932, xlix, 177.)

Syphilis of the Central Nervous System: Diagnosis, Treatment and Control *

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FROM the economic standpoint, the prevention and control of neurosyphilis is of interest to every member of the community. About 20% of the inmates of our insane asylums have syphilis. Stokes[1] estimates that 12% of all insanity is syphilitic, and that the cost to the taxpayers of the United States is nearly one-half billion dollars yearly. Williams[2] showed in a study of one hundred (100) men dying from syphilitic insanity that 78 women and 109 children were left dependent on the state; that the cost of caring for the men alone was over $39,000 and that 10 of them represented an economic loss of about $200,000. Pollock[3] states that syphilitic insanity costs the state of New York $500,000 annually. It can safely be said that practically all deaths in adults under 40 years of age from apoplexy and paralysis (excluding infantile paralysis and toxic paralysis from lead, adulterated Jamaica ginger, etc.) and about 50% of all deaths from non-epidemic encephalitis and softening of the brain are due to neurosyphilis. In addition to all this, we know that the victim of tabes, paresis, paralysis, optic atrophy, deafness, and other forms of diffuse meningitis lives for years; that he is an economic loss to the community and to his family; and that he is a constant menace to the health of both.

From the medical viewpoint, the subject of neurosyphilis is of importance to all of us who treat syphilis. It is of special importance to the general practitioner because it is to him we must look not only for an early recognition of the disease but also for its prevention.

It is the consensus of opinion that the cerebrospinal system is invaded by the spirochete early in the disease, probably at the time of the generalization of the infection, i.e., well before the appearance of the roseola. This is supported by substantial evidence. Experimentally, the spirochete has been demonstrated in the spinal fluid within 48 hours after inoculation. During the primary stage, in fluids otherwise normal, the spirochete has been found in from 15 to 20% of cases. Also during the primary stage, abnormal fluid findings have been made in from 16 to 22% of cases studied. In the secondary stage, the percentages range from 13.8% in treated cases to as high as 78% in untreated cases. In addition to this, we have a small number of patients who, while the spinal fluid is normal, show unmistakable symptoms of neuro-involvement.

All syphilitics are potential neurosyphilitics. There is no question that the percentage of patients whose central nervous system is invaded by the spirochete is high. Some place it at 100%. Of this number, however, only a comparatively few develop late neurosyphilis. Just what factors determine whether or not a patient will have neurosyphilis are not known. Some are evidently cured spontaneously, while the routine treatment of early syphilis cures many more. At one time, alcohol, trauma, intellectual strain, etc., were held responsible. They probably have no influence except in so far as they lower the general resistance which is now thought to play an important rôle. The theory that there exists a neurotropic strain of the spirochete has not been proven nor has it been established that the use of arsphenamines is responsible. The fact that there has been an increase in the incidence of neurosyphilis since the advent of the arsphenamines is due more likely to better methods of diagnosis and to no small extent to the feeling which exists among a large number of practitioners that a few doses of arsphenamines followed by a few negative Wassermann reactions constitute a cure.

Moore[4] in his work has fairly well established the fact that insufficient early treatment is responsible for a large percentage of cases of neurosyphilis. In his series, of those who received no treatment, 30% developed neurosyphilis; of those receiving one course of treatment, 25%; two courses of treatment, 24%; three, 13%; and four, 8%. Each course consisted of six arsphenamine and six mercury injections. It has been my experience at the Clinic that of the neurosyphilitics seeking treatment a very large percentage have received very little, if any, early treatment.

Concerning the pathology, I simply wish to state that the changes do not differ from those seen in other parts of the body. They are classed as meningeal, vascular, or parenchymatous. It is rare, however, that one form exists without being associated with one or both of the other types, giving rise to such combinations as the meningo-vascular or meningo-vascular-parenchymatous.

To establish a diagnosis of neurosyphilis, one must consider such factors as history, age, race, sex, signs and symptoms, and laboratory findings. A positive history of infection is often of aid in establishing our diagnosis, but a negative history is of little value. Apoplexy or paralysis in young people points strongly to neuro-involvement. Although syphilis is much more prevalent among Negroes, neurosyphilis is twice as frequent among whites. Females are less frequently affected than males, the ratio being about 1-5. About 60% of pregnant women whose blood Wassermann reaction is negative and who are wives of neurosyphilitics show spinal fluid changes.

One should strongly suspect cerebrospinal syphilis in a patient who has a persistently positive or a continually relapsing blood Wassermann reaction, also in those who have syphilitic leucoderma or alopecia, cardiovascular syphilis, or gumma of the stomach. Perforating ulcer and Charcot joint are indications of neurosyphilis.

The signs and symptoms are as numerous and as various as are the pathological processes that cause them. Neurosyphilis may be present with little or

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no clinical evidence. The spinal fluid may furnish the only clue to its existence.

The symptoms may be acute or chronic, mild or severe, intermittent or progressive. They may be preceded by prodromes or their advent may be unannounced. Certain symptoms, i.e., headaches, increased tendon reflexes, lightning pains, etc., are caused by irritation, occur early in the disease and are amendable by treatment. Others, i.e., the Argyll Robertson pupil, lost tendon reflexes, and mental symptoms, are the result of irreparable damage, make their appearance late, and offer but little hope of responding to therapy. Many symptoms point to localization, as for example, headache to the cerebral meninges; cranial nerve palsies to the basilar meninges; lightning pains and abnormal tendon reflexes of the lower extremity to involvement of the lower cord; and seizures, hemiplegias, aphasias, and mental symptoms to the cerebral parenchyma. All the symptoms may be grouped and point to the involvement of one particular part of the central nervous system. It is more common, and decidedly more characteristic of the process, that they be varied and that they give evidence of wide spread involvement.

Malaise is of frequent occurrence. It is often the cause of the patient seeking advice. He complains of being "all in" or "tired out" after the smallest amount of exertion. Anorexia and loss of weight are frequently associated with it. Anxiety is very common. The patient looks anxious, is depressed, has lost confidence in himself, and has a feeling of impending disaster, insanity or death. The headaches of cerebral meningitis vary from the dull intermittent type seen in basilar meningitis to the severe bursting headache of meningitis of the convexity. This may be continuous day and night, causing insomnia, extreme anxiety and often leading to suicide. Pains of the neck, back and extremities may be dull and intermittent or sharp, shooting, stabbing, recurring again and again at the same spot as in the lightning pains of tabes. Paraesthesias consist of transitory attacks of numbness, tingling, prickling, sensations of constriction, or of heat or cold. They occur first in one place and then another, or they may involve a whole limb or the entire half of the body. Disturbances of bladder control and of the sexual reflexes are common. The first signs may be bed wetting, dribbling, inability to start the flow, or retention. Disturbances of locomotion vary from a feeling of uncertainty to the extreme disability of advanced locomotor ataxia. Seizures or convulsive attacks, delusions and character change may occur years in advance of pronounced clinical symptoms of cerebral or paretic neurosyphilis.

Among the signs that are suggestive are abnormal reflexes, abnormal pupillary changes, positive Romberg or Babinski and ataxia. The eye furnishes much evidence of importance. Pupillary changes are the most frequent. Of these, the dilated pupil with normal reflexes but presenting rhythmic contractions and dilations is the most common. This phenomenon, known as hippus, is not pathognomonic of syphilis but occurs also with great frequency in epilepsy and in anxiety-neuroses. Next in order of frequency are inequality, irregularity and eccentricity. The Argyll Robertson pupil, so well known to all of us, occurs in about 50% of cases. We are, however, apt to overlook the sluggish pupil which precedes it by years. Visual disturbance due to optic atrophy or neuritis occurs as the first symptom in about 20% of cases. Among the most common signs of cranial nerve involvement are ptosis, diplopia, facial paralysis, dizziness, or ringing in the ears and deafness. These are of sudden onset and frequently occur during sleep.

No examination is complete without a blood Wassermann test, and a spinal fluid analysis. The spinal fluid test is as essential in the management of syphilis as is the blood Wassermann. Marked changes in the fluid may be discerned months and even years before the appearance of neurologic signs and symptoms. There appears to be no relation between the fluid changes and these signs and symptoms. A subject with pronounced clinical evidence of neurosyphilis may have a normal spinal fluid while one with marked abnormalities in the fluid may be neurologically asymptomatic. The fact that the fluid may at times furnish the only evidence of neuro-involvement justifies the demand that spinal fluid examinations be routine and not optional in the proper management of syphilis. The results of the examination are prognostic and reveal the result of treatment as well as being diagnostic.

An adequate examination of the spinal fluid in so far as it relates to the diagnosis of neurosyphilis consists of four tests: the Wassermann reaction, an estimation of the globulin content, the cell count, and the colloidal gold test.

The Wassermann is the only one that is specific. The others are of value only when considered as a group or in connection with neurological manifestations. A positive Wassermann means neurosyphilis. A negative result does not rule out syphilis, nor does a positive reaction rule out the coexistence of some other nonsyphilitic neurological process. The test should be performed with two antigens on four amounts of fluid, 2cc., 1 cc., 5cc., and .1 cc. Often the larger amounts will reveal a positive reaction in fluids that are negative to the smaller quantities. The smaller the amount that shows a positive result, the more severe the reaction and the graver the prognosis. The persistence of a positive reaction in small amounts of fluid with an increase in globulin, a low cell count, and an abnormal gold test would indicate an involvement of the parenchyma of the brain, and there is apt to be a sudden onset of the paretic syndrome at any time.

Next in importance is the cell count. Any number over 10 should be considered as abnormal. The cell count is a good indicator of the acuteness of the meningeal process. In acute meningitis, the count is high. In the more chronic forms, it is low and accompanied by a positive Wassermann, increased globulin, and an abnormal colloidal gold curve. Early in the disease, a low count is indicative of a slight infection. Late in the infection a low count with positive Wassermann, increased globulin and abnormal gold curve indicates a deep-seated lesion. A very high count (200-2,000) indicates a basilar meningitis of the secondary stage. A moderately high count (30-80) points to a combined meningeal and parenchymatous process. In a purely vascular neurosyphilis, the count is often normal.

The globulin content is the least valuable of the four test. In no way can it be considered as being specific. It may occur in any inflammatory process. A persistent increase in globulin may obtain preceding a relapse. Associated with a persistent positive blood Wassermann, it may be the only evidence in the spinal fluid of vascular neurosyphilis.

The colloidal gold test is purely empirical and like

the globulin test is not specific. When abnormal gold curves occur in conjunction with positive spinal fluid or with positive neurological findings, then this test will aid in determining the type of neurosyphilis present, e.g., a first zone curve points to paresis while a second zone curve suggests tabes.

The microscopic slide precipitation test should also be added to this list. Eller and Rein[5] showed that this test is more delicate than the Wassermann reaction, that it is more valuable as an exclusion test, and that in cases of neurosyphilis under treatment, positive fluids became negative to the Wassermann test before they did to the microscopic slide precipitation test.

By performing both of these tests, a greater degree of accuracy in diagnosis will be obtained. By the use of the microscopic slide precipitation test in determining the progress made in treatment, it will be possible to determine with a greater degree of certainty when treatment may be discontinued.

The treatment of neurosyphilis consists of prophylactic and curative measures. Much can now be accomplished toward returning many incapacitated neurosyphilitics to a useful, self-sustaining life. The preparations that are effective are the arsphenamines, tryparsamide, mercury, bismuth, and the iodides. Of these tryparsamide is now being recognized as the most valuable. When this is contraindicated, old arsphenamine and silver arsphenamine are indicated. Neoarsphenamine is of no value in syphilis of the parenchyma. It is, however, indicated in meningitis and in some cases of the vascular type. Mercury, bismuth and the iodides are of especial use in preparing patients for the more energetic treatment with the arsenicals. They are also used in combination with them.

Various methods have been devised for the treatment of neurosyphilis. Of these, intraspinal therapy, spinal drainage, and thermal treatment are the outstanding. Intraspinal therapy has been the subject of much controversy. Whether or not the theory of treatment is correct, clinically it has been productive of results. In tabes, it should be administered through the lumbar route and in paresis through the suboccipital. Thermal therapy consists of raising the body temperature to such a degree as to destroy the spirochetes. For this, various agents have been used, such as hot baths, injection of foreign proteids, inoculation with rat bite fever, or malaria, and the high frequency current. Of these, malaria appears at the present time the most valuable.

Spinal drainage consists of withdrawing from the spinal canal 30-40 cc. of fluid in from 10-30 minutes after the intravenous introduction of an arsphenamine or of tryparsamide.

The various forms of meningeal involvement are usually cured by the same methods as are employed in early syphilis. If these are not sufficient, we augment them with spinal drainage, or intraspinal therapy. The vascular type is very often associated with general cardiovascular involvement and should be treated in the same way. First, preparation with bismuth and the iodides. Then in suitable cases with small doses of the arsphenamines. Paresis is best treated with a combination of malaria and tryparsamide and bismuth and cisternal drainage. Tabes responds best to a combination of tryparsamide, bismuth and the iodides either with or without spinal drainage.

The prevention of neurosyphilis depends upon the early recognition of the infection, the early institution of treatment, and the carrying out of the same to a successful conclusion.

Every penile lesion should be suspected and subjected to repeated dark field tests in case of negative nndings. Repeated blood Wassermann tests should also be made over a period of 6-8 weeks until a positive finding is made or until we are satisfied syphilis does not exist.

Once a diagnosis is established, treatment should be started. I would caution against the stopping of treatment too soon. Many of our leading syphilologists are recognizing the need of carrying on therapy for a period of at least two years. The first year's treatment should be practically continuous.

The condition of the patient should be checked repeatedly by physical and neurological examinations, blood Wassermann and spinal fluid tests. No patient should be discharged without such tests. The first spinal fluid test should be made not later than at the end of the first course of arsphenamine injections. It has been my practice to do it following the third or fourth injection. The reluctance of physicians to insist on the spinal test has been because of the inconvenience of hospitalization, and on account of intense suffering that sometimes ensues. About 10% of patients, following lumbar puncture, have severe headaches lasting from 24 to 48 hours; about 1% have these symptoms for a period of ten days to two weeks. This can be avoided if we substitute the suboccipital puncture for the lumbar puncture. There is no necessity for hospitalization. The patient gets up from the table and goes to work. As a matter of fact it is better that he sit in the upright position for the pressure is then negative and there will be no seepage, and consequently no headache.

In conclusion I should like to stress the following:

1) The necessity of thorough treatment in early syphilis.
2) The necessity of routine spinal fluid and neurological examinations.
3) The necessity of care in selecting type of treatment to be administered in each individual case.

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Hemorrhagic Thrombocytopenia in Children

1. Hemorrhagic thrombocytopenia is frequently preceded by infection.

2. The minor fluctuations in the platelet count after it has fallen to a pathologic level are devoid of clinical significance; these fluctuations should not be used alone as criteria either of remission or of relapse, nor should these minor changes in the platelet count be used alone as indications for removal of the spleen.

3. The clinical evidences of hemorrhagic activity are the most valuable guides in prognosis and in the indications for splenectomy.

4. Spontaneous remission occurs in a large percentage of cases; transfusion frequently accelerates remission. Splenectomy causes the most rapid remission; it is not uniformly successful and is always a dangerous procedure.

5. Splenectomy should be reserved for a small group of cases: (*a*) those with fulminating uncontrollable hemorrhage; (*b*) those with chronic hemorrhage which interferes with normal growth and development or is a handicap to the well being of the patient.—Stafford McLean, M.D., et al., *J. A. M. A.*, Jan. 30, '32.

Cancer

Department Edited by JOHN M. SWAN, M.D., F.A.C.P.

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Cancer of the Uterus

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CANCER of the cervix is by far the most common malignant disease of the pelvic viscera. Forty per cent of cancers occurring in women are of the cervix. Statistics show that about 105,000 in the United States die of cancer each year and of these more than 21,000 have cancer of the cervix.

Cancer, in general, as well as cancer of the cervix, appears to be on the increase. Perhaps this may be only relatively so, due to better methods of examination and technique. But, even though more patients are coming with early symptoms, even though more physicians are making careful diagnoses based upon adequate examinations, and even though more patients are receiving adequate treatment, we have a long way to go to have more and more physicians make adequate examinations and we have a long way to go to institute proper and adequate early treatment. In other words, let it be particularly stressed that many lives are being needlessly sacrificed due to our lack of thoroughness in using the knowledge we have at hand.

Cancer untreated is 100% fatal. Cancer treated by the best known methods has a mortality ranging from 10% to 100%. As yet we do not know the final answer to cancer. We do not know its cause* nor do we have a specific cure. However, we can, if we use the knowledge we have at hand, further reduce the mortality 25% to 50%.

It is not always possible to make an early diagnosis even when we have all available data. Cancer is often obscure when located in the lungs, mediastinum, liver, stomach, intestines, ovaries, etc. Often enough, when symptoms are sufficiently pronounced to make diagnosis possible, it is already too late to institute curative procedures.

In cancer of the lips, tongue, throat, lymph nodes, thyroid, skin, rectum, uterus and cervix, in other words, any location accessible from the exterior, the disease can be diagnosed early. Upon early diagnosis depends early treatment. Upon early treatment depends a lowered mortality rate.

PATIENTS should be taught not to fear cancer. They should be taught that cancer can be and is being cured. They should be taught that the ground upon which cancer grows should be removed. They should be taught that at first cancer is a localized disease, which, if removed, results in cure. They should be taught that predisposing factors such as bad teeth, diseased tonsils, chronic irritation anywhere, indurated or pigmented lesions of the skin, lacerations of the cervix, etc., should be removed. They should be taught that a lump in the breast, an indurated lymph node, an indurated thyroid, a chronic lesion of the skin should be investigated, possibly with biopsy and, if indicated, radical removal.

Women should be taught that any variation from normal menstruation, or any chronic leukorrhea, should be investigated by a competent gynecologist at the earliest possible time. Particularly is this true in women over thirty-five where there is spotting between periods or after the menopause. Pain will drive most women to a physician. Unfortunately, pain is a late symptom of cervical cancer.

Women who have borne children should be taught to have a physical, including a gynecological examination, at least once a year. This should be particularly stressed in all over thirty-five.

The laity must play a very large part by coming for early examination on the first deviation from normal health. The physician must see to it that the laity is instructed by every available means, including suitable propaganda, lectures, radio talks, etc., in order that early diagnosis may be made possible.

The physician must play a very large part in schooling himself in thorough examinations. It is of the utmost importance in cancer of the cervix to be thorough or to refer your patient to some gynecologist who is thorough. Too much stress can not be laid here.

WITHIN the last year I have had patients come to me for examination who had been under regular treatment by regular physicians and who presented far advanced, undiagnosed cancer of the cervix. One patient had been treated for ulcer of the cervix twice weekly for over eight months. She had been to her physician the day before coming to me and was told that her ulcer was persistent but that she should not become discouraged because he, the physician, had never yet failed to cure an ulcer of the cervix. On examination, the cervix was found several times normal size, nodular, ulcerated, bleeding and the entire pelvic floor fixed. Inguinal glands were enlarged, the liver was enlarged and nodular and small masses could be felt in the abdomen. The patient had lost over forty pounds, red count was 2,300,000 and hemoglobin 40%. The patient's husband was told that his wife had an inoperable, incurable cancer with metastasis and that nothing could be done except to institute palliative treatment. Due to the surprise and shock of this advice, perhaps, they

* The author of the contribution published in the department this month has made the statement that the cause of cancer is not known. This is fundamentally true, but so far as all practical purposes are concerned we are of the opinion that cancer is caused by various forms of chronic irritation and it has been shown experimentally that in mice belonging to "cancer familics" cancer will not develop if they can be guarded against the effects of such chronic irritations (Maud Slye).—Editor Cancer Department.

consulted another surgeon. The patient was operated on by him on the second day following my examination. The abdomen was opened and closed and the fee collected. In seven weeks suitable services were held for the patient.

If there is anything in the entire domain of medicine that is to be more condemned than carelessness or incompetence in this field or actual exploitation of cancer cases, I am at a loss to know what it is. All of us can not be up to date in all fields of medicine. However, all of us can know what we do know and all of us can recognize what we do not know and refer our patients to those skilled in the particular field according to the patients' needs.

NO physician will ever be severely criticized for saying he does not know and seeking consultation. One should, however, be most severely criticized for attempting that which he is not qualified to attempt. Particularly is this true in cancer of the uterus and cervix and with radiation and surgical treatment. I have no sympathy with the occasional user of radium or X-ray or with the occasional operator in cancer of the cervix. The broadest knowledge and the broadest experience are none too good. The best of us are none too wise. Here we are dealing with a disease which is 100% fatal, if not treated promptly and radically.

Usually hemorrhage, either as profuse or prolonged menstruation or dribbling between periods or showing after menopause, is the first symptom which brings the patient to seek aid. Prior to this hemorrhage there is more or less leukorrhea. More often than not, there is no pain. There may be some backache, pain in the back of the neck and more often a sensation of pelvic pressure or bearing down. On examination we may find the cervix eroded or an old laceration with indurated lips, and bleeding may readily occur on touch. The cervix may be somewhat hard, possibly nodular. If the disease is more advanced the cervix may be ulcerated and show a more or less extensive cauliflower growth. If early, the cervix is not fixed. The uterus has normal excursion. As the disease progresses, induration extends out from the cervix into the broad ligaments, and upward along the lymph channels following the ureters. Later the bladder and rectum become involved and the pelvic floor presents a solid, hard, ulcerating mass. In adenocarcinoma the early seat may be anywhere in the cervical canal and may escape attention. The cervix may be somewhat edematous and show no other sign except hemorrhage. Later the disease spreads and the growth can be readily seen spreading from the external os. If, in any case, diagnosis is in doubt, biopsy should be done in epithelioma and D & C and microscopical examination in adenocarcinoma. Usually the curette will show the location of the lesion—whether in cervix or uterine cavity.

Thus we have the three classical stages of cancer:

I. Where cervix is involved with no fixation.
II. Where cervix is involved with extension into surrounding structures but not complete fixation.
III. Where cervix is involved with extensive infiltration and complete fixation of the pelvic floor.

In Class I, prognosis should be good with 70 to 90% five-year recoveries.

In Class II, prognosis should be guarded with 10 to 30% five-year recoveries.

In Class III, prognosis should be poor with no recoveries.

STATISTICS show us that cases in Class I are about equally successfully treated by surgery and radium. With surgery there is a 3 to 8% operative mortality. With radium there is none. In Class II with surgery there is an initial mortality of 6 to 15%, with not more than 10 to 15% five-year recoveries. With radium there is no initial mortality and 10 to 25% five-year cures. In Class III, the case is not surgical and nothing more than palliation can be hoped for. Hemorrhage and odor can often be checked and, perhaps, the patient made a little more comfortable.

In many clinics radium is entirely superseding surgery in cancer of the cervix. In fact, cancer of the cervix is no longer considered a surgical problem. With radium showing no initial mortality and equal to surgery in selected cases and far superior in more advanced cases, there is little reason in surgery.

Cancer of the cervix should not in any case be treated by radium and then followed by surgery. Radium should be applied in a maximum intracervical dose ranging from 4,000 to 6,000 mg. hrs. with 2,000 to 4,000 mg. hrs. cross-fire to the cervix, in the upper vagina. If applied in sufficient dosage, radium will kill or render inert all cancer cells within 3 to 6 cm. or more. Resulting resolution produces much fibrous tissue, which, if opened up by surgery, will release any inert cancer cells from the fibrous interstices and a new growth results which is much more resistant to further treatment.

IN contradistinction to this, cancer of the body of the uterus should always be treated by radium and followed by panhysterectomy. Here involvement of the lymphatics is not so early and, if there is little or no infiltration outside of the uterus, the whole diseased area can be radically removed. In cancer of the body of the uterus or cancer of the cervical canal, the cervix should be first sterilized with the cautery and then tightly sewed, including a gauze cervical plug in order that during the following hysterectomy no cancer cells soil the operative field. After sewing the cervix, the vagina is wiped with 25% tincture of iodine or mercurochrome in alcohol and acetone.

In women, cancer in general and cancer of the cervix in particular appear to be more malignant during menstrual life. A larger percentage of five-year cures can be expected in patients over fifty-five with somewhat smaller dosage. Adenocarcinoma of the cervix is more resistant to radium than epithelioma but, if the disease is confined to the cervix, there should be little difference in five-year results. If the disease is beyond the cervix, adenocarcinoma will show a considerably higher mortality.

CAREFUL history is necessary to ascertain whether there has been any previous pelvic infection, such as infection following labor, miscarriages or gonorrheal disease. Radium in large doses, such as are necessary in cervical or uterine cancer, may light up an old latent infection, sometimes of six to eight years duration. In cancer cases we must take this chance with the possibility of subsequent laparotomy for drainage. However, it is rather unpleasant to have such an affair happen unless the condition has been anticipated and the patient forewarned.

The radium dosage may be given in one or two treatments, two to six weeks apart. Fifty to one hundred mgs. are used filtered with .5mm. brass and 2mm. rubber. The first treatment should be the heaviest and, if there is sufficient good tissue in the cervix, one treatment of 6,000 to 8,000 mg. hrs. should be sufficient, this treatment to be divided into intracervical and cross-fire extracervical.

(Concluded on page 128)

Economics

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What always happens when Cheapness of Medical Service Becomes the principal Consideration

A FAVORITE argument advanced for the private group clinic is that the overhead expenses of private physicians would be reduced. They would be reduced from 40% of the gross income to 25% or even lower. This is undoubtedly true as far as the general details are enumerated. Dispensing with an automobile would at once bring that reduction to physicians of the general income group. Part, instead of the full, rent for an office would reduce expenses some more, while with office separated from one's home one could live in surroundings less costly and more befitting an income class of $7.00 to $10.00 a day. The doctor could reduce his overhead still further by not purchasing books or journals but by securing them from libraries. Of course, the more reduced the doctor's need for money the less wages would industry feel it had to pay its employees for living expenses.

There is one expense, however, of which little is said —the overhead expense of the clinic. Experience has shown, among other things, that the group clinic cannot survive without the aid of an agent, some go-getter, to solicit business. His salary and the expenses of his business office including advertising, business literature, gratuities or rebates consume from 45% to 65% of the gross income. At a recent medical society meeting in a Western state where groups are numerous, the number of doctors present who agreed that the solicitor was an essential to a group clinic was 100%. Competition with other groups entails reduction of fees, cheapens the laboratory equipment and pharmacy and lowers the quality of service.

The members of the staff with inspiration gone and incentive lost soon relinquish their positions or, driven by necessity, fall into the drudging routine of machine-like work.

BUSINESS—"big business"—soon takes a hand. It is believed that many lay people, actuated by the motives which inspire them to give their time, their energies and their money to institutions with charitable purposes, will continue so to devote themselves without reward in behalf of these private financial enterprises. Many may. Already throughout the land, however, other business men see in the group plans an opportunity for personal profit. Organization, they say, will do the work—the work, really, of extracting for themselves a large proportion of the fees paid by sick people to the doctors.

In the Borough of Brooklyn there was recently organized a health and accident clinic for working people. This clinic was to be a successor in locality to a branch of the recently defunct Wolf service. The business men of the community purchased stock in the corporation. A doctor was secured who would for a miserable salary devote his full time daily from 8 A.M. to 7 P.M. (with half day on Sunday) to the clinic. The business men stockholders would exercise moral suasion over their employees to use the clinic for accident or ill health. In some cases fees were charged, as in Workmen's Compensation accidents. In others, contracts were made with employers for their working people—for which, of course, the employer would deduct from the pay envelope. Business was secured through advertising in the local papers and by personal soliciting. "Dividends on the capital to the stockholders would begin—almost at once."

WHEN the examination of Food Handlers was returned by the Department of Health to the practitioners of the city, racketeering in a new quarter began. One Health Service in Manhattan advertised for doctors to make these examinations. The doctors were paid 40% of whatever fee was collected. Sometimes the fee was one dollar—more frequently fifty cents—occasionally forty cents. The charge varied with the arrangement the go-getter was able to make with employers or employees.

It is needless to state what kind of examination was made. It is hardly necessary to say that these are corporations practising medicine in flagrant violation of the law. One is assured that the County Medical Societies, the District Attorney and the Department of Health will put an end in time to these pernicious activities.

The public will find, along with the insurance companies and many industrial corporations, that the service obtained through business methods which make cheapness the principal consideration soon deteriorates in quality to a very low level. Many of the Western groups, too, having passed through the enthusiastic days of a new plan, have come to this realization. It is most important for the public to learn not in what ways and to what extent the medical service may be reduced in costs, but that the most valuable thing in this world to the seriously sick man is the service of his own doctor—a doctor of knowledge, of skill, of responsibility and of irreproachable character.

Primary Actinomycosis of Stomach

A proved case of primary actinomycosis of the stomach with metastasis to the liver, reported by Alexander W. Blain, Detroit (Journal A. M. A., Jan. 21, 1933), is apparently the second authentic case in the medical literature. A review of both the American and the European literature reveals no cases of primary gastric actinomycosis to have been reported in the United States and that in the six cases reported in the European literature only one survived strict diagnostic scrutiny.

Contemporary Progress

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Medicine

Treatment of Elderly Diabetic Patients with Cardiovascular Disease

S. Soskin and his associates at the Michael Reese Hospital, Chicago (*Archives of Internal Medicine*, 51 :122, January, 1933), have made a study of the effect of insulin on the heart in elderly diabetic patients with cardiovascular disease. In 7 such patients with clinical evidence of coronary sclerosis or angina pectoris, a single large dose of insulin was given after a control period of observation. This produced definite objective and subjective signs of myocardial impairment and definite changes in the electrocardiogram, especially in the Q R S complex, which was diminished in amplitude, and in the S-T segment and T wave. The changes in the latter were found to depend on the direction of the major deflection of the Q R S complex. Symptoms were relieved and the electrocardiographic findings tended to return to the previous status when dextrose was given. In therapeutic experiments with these patients, after a standard diet had been instituted, insulin was given in therapeutic doses for certain periods and omitted during control periods. It was found that during the insulin periods there were one or more electrocardiographic changes similar to those observed after a single large dose of insulin, accompanied by subjective symptoms such as weakness and prostration, dizziness, palpitations, precordial pain and constriction, amounting in some cases to true attacks of angina. In most of these experiments the electrocardiographic changes tended to follow the fluctuations in the blood sugar, but they did not occur at any definite blood sugar levels. In 2 cases in which the carbohydrate content of the diet was lowered without insulin, the same results were obtained as with insulin and a higher carbohydrate diet. The authors conclude that the deleterious action of insulin on the heart in patients with cardiovascular disease is not due to any toxic action of the insulin, but to a reduction of the supply of carbohydrate readily available to the myocardium. These results indicate that insulin *per se* is not harmful to the diabetic patient with cardiovascular disease, but that the regulation of the treatment in such cases to insure a sufficient carbohydrate supply to the damaged myocardium is of the greatest importance.

Oral Administration of Metaphen in Gastric and Duodenal Ulcers

C. M. Trippe (*Annals of Internal Medicine*, 6:901, January, 1933) reports the use of the mercurial metaphen in the treatment of gastric and duodenal ulcer. It is usually given by mouth in a 1:500 solution in a dose of 4 c.c. three or four times a day. The prescribed dose is diluted with equal parts of glycerine or of cinnamon water and taken in half a glass of water immediately before or after meals in cases of gastric ulcer, and an hour before or two hours after meals in duodenal ulcer. In four years the author has treated 26 cases of gastric and 56 cases of duodenal ulcer. In practically all these cases, pain was relieved in an average of three days' time; as a rule after relief of pain is obtained, the drug is continued in full dosage for a week, then two doses daily the second week, one dose daily the third week, and a dose every other day the fourth week, and then discontinued. But a number of patients have continued the full dosage for several weeks without reporting to the author, because they felt well and feared a recurrence of symptoms if they discontinued the drug. In no case did any toxic symptoms develop. Of the 82 cases treated, all but 3 were completely relieved of symptoms; one was improved, one temporarily improved, and only one not improved. Most of these patients previous to the use of metaphen had been on a restricted diet, usually a strict Sippy diet; in every case they were given a varied diet without causing any return of symptoms. In a number of cases, X-ray studies were made before and after treatment and demonstrated complete disappearance of the ulcers after treatment. As metaphen is primarily a bactericidal agent, its action in gastric and duodenal ulcer may be due to the control of infection which has been shown by a number of investigations to play an important part in the evolution of gastric and duodenal ulcers.

Treatment of Pernicious Anemia with Intramuscular Injections of Gastric Juice

R. S. Morris and his associates at the University of Cincinnati (*American Journal of Medical Sciences*, 184:778, December, 1932) report the treatment of pernicious anemia with intramuscular injections of gastric juice. In their first experiments normal human gastric juice was used, concentrated by distillation *in vacuo*. Injections of this concentrate in amounts equal to 300 to 400 c.c. of the unconcentrated gastric juice caused a reticulocyte response within three days and a rapid rise in the red cell count. In one case in which the red cell count could not be increased above 4.1 million by daily injections of liver extract, the gastric juice injections raised the count to 5.1 million within fourteen days. More recently the gastric juice of swine has been used; a concentrate has been prepared that produces no leucocytosis, a slight local reaction and a reticulocyte response beginning within three days in pernicious anemia patients, when a single injection of an amount equivalent to 500 c.c. of the unconcentrated gastric juice is given. The authors' studies of this anti-anemic factor in gastric juice has shown it to be thermolabile, dialysable and exhaustible; it is probably a hormone, for which they propose the name *addisin* after Thomas Addison, who first described pernicious anemia. It is effective in pernicious anemia only when given parenterally, not by mouth; and may be effective in other blood dyscrasias, as it is apparently the physiological stimulant of the bone marrow. It seems highly probable, in the authors' opinion, that the temporary lack of "addisin" in the gastric juice is the cause of pernicious anemia.

A New Oxygen Tent

E. P. Poulton (*Lancet*, 1:244, Feb. 4, 1933) describes a form of bed tent for administering oxygen and carbon dioxide used at Guy's Hospital, London. The new features are: Cooling and drying by means of ice tins let in through the roof of the tent; ventilation is produced by means of an injector as described by Cecil and Plummer, but the stream of oxygen delivered can be varied; CO_2 is administered by partially short circuiting the CO_2 absorption box. A clinical CO_2 measuring pipette is also described. The use of oxygen and CO_2 has been found of great value in the treatment of pneumonia. It has also been used with much relief to the patient in congestive cardiac failure, emphysema, chronic bronchitis, and in some cases of asthma with frequent attacks. Oxygen should undoubtedly be administered when there is arterial desaturation (anoxic cyanosis), but it is also of value in some cases when the arterial saturation is normal. In all cases of breathlessness (excluding the breathlessness of diabetes and uremia), the administration of oxygen should be considered; its value may be tested by administering pure oxygen by means of face mask for five or ten minutes to determine if it gives the patient relief, and improves his color.

Parathyroid Hormone in Infiltrations of the Subcutaneous Tissues

O. Horn (*Acta medica Scandinavica*, 79:219, Dec. 30, 1932) reports the use of parathyroid hormone in the treatment of subcutaneous infiltration (fibrositis, cellulitis), usually accompanied by myalgia. A total of 124 cases of this type have been treated, in some of which the myalgia was severe. In all but one of these cases some improvement was obtained, and in many, the improvement was striking. The parathyroid hormone was given in doses of 2 c.c. by subcutaneous injection without causing any local reaction, and only rarely any general reaction.

At first injections were given daily, except that one day each week was skipped; as the pain subsided the number of injections was gradually reduced to one monthly or every two or three months. The most immediate effect of the treatment was the relief of pain; subsequently the infiltration was softened, tenderness subsided, and some of the normal tonus of the skin returned. In many cases the patients showed a peculiar euphoria that appeared to be a specific effect of the treatment. In spite of the improvement under parathyroid therapy, blood chemistry studies in a number of the patients showed no definite evidence of parathyroid insufficiency.

Protein in the Diet

W. S. McCann (*Southern Medical Journal, 26:22,* January, 1933) in a general discussion of the use of protein in the diet, states that its essential use is for repair and growth, and in women for reproduction and lactation. In toxic disease the "repair quota" is increased both at the height of the disease and in convalescence. Deficiency of protein produces a dropsy with low serum proteins. In selecting proteins for the diet the quality of the protein as well as the quantity must be determined; smaller quantities of proteins of high quality are required than those of low quality. Quality depends upon the richness and variety of the amino acid "building stones"; in general, meat, fish, eggs and milk are rich in proteins of high quality; the proteins of whole wheat and of potato are also of high quality, but an adequate supply cannot be obtained from these two sources alone. It has been found that if people have a free choice of diet, the proportion of protein will be approximately 15 per cent. of the total calories, and this undoubtedly represents an optimal proportion for man. In times of economic depression the protein of the diet may be inadequate for large sections of the population because of the high cost of protein foods; every effort should be made to see that children and nursing mothers especially get enough protein, preferably from milk.

Surgery

Surgical Applications of the Schilling Differential Blood Count

J. S. Harter and C. Lyons (*Surgery, Gynecology and Obstetrics,* 56:182, February, 1933) have used the Schilling differential blood count in the study of surgical infections. The complete interpretation of the Schilling hemogram takes account of the distribution of the lymphocytes, monocytes, eosinophils and basophils as well as of the types of neutrophiles. An increase of the juvenile and band or staff forms of the neutrophiles, usually associated with a decrease of lymphocytes and monocytes, is designated a "shift to the left"; an increase in the mature neutrophiles usually associated with a return of lymphocytes and monocytes to normal or above is designated as a "shift to the right." In surgical infections an increasing shift to the left with a rising white blood cell count occurs if the patient shows an adequate response to the increased demand for white blood cells; an increasing shift to the left with a falling leucocyte count indicates an inability to respond to this demand. In subsiding infection there is a shift to the right which may be associated with a temporary leucocytosis. Low lymphocyte counts have been found to occur especially in advancing acute infections in patients with poor resistance; normal or high lymphocyte counts in association with a shift to the left is an indication of good resistance; it is seen in cases of localized sepsis or chronic infection. The authors have found that the Schilling differential count can be readily adapted for routine laboratory use, and is of more value than the usual differential count for studying the progress of a patient with an infection. They regard the Schilling hemogram as the simplest classification of neutrophiles giving an adequate picture of the bone marrow response.

The Use of Ultra-Violet Irradiated Petrolatum

E. H. Eising (*American Journal of Surgery,* 19:244, February, 1933) reports the use of petrolatum that has been exposed to ultra-violet irradiation in the treatment of infected wounds, sinuses, osteomyelitis and ulcers. In postoperative sinuses, one or two injections of the irradiated petrolatum into the sinus was usually sufficient to produce complete closure, although the sinus had persisted for weeks. In more extensive wound infections of the abdominal wall, the open wound was flooded with warmed irradiated petrolatum and covered with gauze dressing which was not tightly bandaged; the application was removed daily or every other day until healthy granulations appeared. The discharge usually was definitely diminished after twenty-four hours, and ceased after the second or third dressing. In every case healing was rapid, and in some cases the wound could be sutured four days after the first application. The author has treated 84 cases of infected abdominal wounds and sinuses by this method with good results in all; also 4 cases of empyema sinuses of long standing. He has also found irradiated petrolatum of great value in chronic osteomyelitis, and has treated 18 cases. If involvement is not extensive, healing can be secured by injection of the petrolatum into the sinus, but in cases with extensive involvement and a small sinus, operation is necessary, with saucerization and flooding of the bony trough with "molten" irradiated petrolatum; dressings may be repeated daily. The application of heat by means of an electric pad or therapeutic lamp is of aid, as it liquefies the petrolatum and increases its penetration of the Haversian canals and canaliculi.

Full-Thickness Skin Graft

J. H. Garlock (*Annals of Surgery,* 97:259, February, 1933) emphasizes the value of the full-thickness skin graft in certain types of surgical defects, especially to cover defects in the popliteal space, the front of the elbow, the forearm and leg, and both aspects of the hand. Even in surgery of the extremities, there are minor contraindications to its use. It should not be placed over bare bone or tendon. In the selection and placing of the graft there are certain factors to be considered. These are future shrinkage, changes in color, the development of heavy scars at the edges, and the growth of hair. In regard to shrinkage, the author has found that when the graft takes perfectly and the loss of surface epithelium is minimum, shrinkage will not be greater than with a pedunculated flap of similar size. In certain sites allowance must be made for shrinkage to preserve function. Changes in color (pigmentation) are slight if there is little loss of surface epithelium; the graft may have a "shiny" appearance, which must be considered when it is used for face defects. A heavy scar may develop along the edges of the graft; the author is not able to explain this development, nor to foretell in what cases it will take place. The majority of hair follicles in a successful graft will grow hair, hence, the graft must be non-hair-bearing skin, unless used in localities where hair is desired. The author has found that in practically every case where a full-thickness skin graft is used, a thin layer of fatty tissue is deposited beneath the graft and a previously depressed area fills up and rises to the level of the surrounding skin. The full-thickness skin graft, the author believes, should be used to cover fresh surgical defects only and not granulating wounds. In the technic of the operation, the following details are of importance: Complete excision of scar tissue, rigid asepsis, complete hemostasis, avoidance of any trauma to the graft, application of firm, even pressure over the grafted area, complete fixation of the part by the use of appropriate splints.

Rôle of Infection in the Production of Postoperative Adhesions

G. P. Muller and L. A. Rademaker (*Archives of Surgery, 26:280,* February, 1933) report animal experiments in which it was found that infection was the chief cause of postoperative intraabdominal adhesions. This finding was confirmed by their clinical study of 42 cases in which re-operation was done for symptoms caused by postoperative adhesions. It was found that in this series only one had no drainage or wound infection; 35 were drained; and of the 7 no drainage cases, 6 had wound infection. Sections of material from cases with postoperative adhesions showed a fibrous network with collagenous fibers and "nests" of fibroblasts, but no micro-organisms. In 2 cases with recent adhesions, staphylococci were obtained in cultures of tissue removed at operation; all other cultures were negative. In a study of the structure of adhesions produced experimentally on animals, nests of fibroblasts and fibrous tissue could easily be demonstrated; but no bacteria in animals killed three months after operation. Cultures were not made. The structure of adhesions produced experimentally by iodine and of those produced by infection was essentially the same except that the fibers of the latter extended more deeply into the muscle layers of the intestines and the direct continuity of line is lost through the action of the infection in the overlying muscle layers.

The Causative Organisms in Appendicitis and Appendiceal Peritonitis

M. Gundel (*Archiv für klinische Chirurgie,* 173:597, Jan. 2, 1933) concludes from his bacteriological study of acute appendicitis and appendiceal peritonitis, that enterococci and the closely allied anhemolytic streptococci are the chief primary causative organisms in acute appendicitis. Hemolytic streptococci, pneumococci and influenza bacilli may also play a rôle in some cases. When perforation occurs, however, these organisms rapidly disappear, and the colon bacillus assumes the chief rôle in the causation of the resulting peritonitis or abscess. All other microorganisms are of secondary importance. In some cases gas bacilli may be present and these organisms undoubtedly increase the severity and toxicity of the infection. Prompt operation is the chief indication in the treatment of acute appendicitis. If perforation has occurred and peritoneal infection is developing, serum therapy is of definite value based on the

bacteriological findings in the peritoneal exudate.

Anticolibacillary Serum in Surgery

H. Vincent of Paris, France (*Surgery, Gynecology and Obstetrics*, 56:66, January, 1933), has prepared an antitoxic and antibacillary serum against the colon bacillus, which he uses in certain surgical infections. *Bacillus coli* is the most common infecting organism in peritonitis and septicemia of appendiceal origin. The author has recovered this organism in 16 out of 17 cases of gangrenous appendicitis from the cloudy or purulent fluid surrounding the appendix. In such cases the author employs the anticolibacillary serum introduced into the operative field and also injected subcutaneously. This method is employed in several French surgical clinics, where the results have been most satisfactory, as in the author's practice, giving a "simple and rapid recovery." This serum is also a valuable adjunct to surgery in cases of pelvic, iliac and perirectal abscesses, when the colon bacillus is the predominating organism found in the pus. In cases of infection of the urinary tract requiring operation in which the colon bacillus is so frequently the chief infecting organism, the use of the anticolibacillary serum is also indicated. In cases of generalized peritonitis of appendiceal origin Vincent advises the use of large doses of the serum, 60 to 100 c.c. in adults and 40 c.c. in children, repeating the injections (subcutaneously) as often as necessary, and diminishing dosage when both the general and the local conditions begin to improve.

Urology

Pathological Differentiation in Bright's Disease

J. Oliver (*Annals of Internal Medicine*, 6:1069, February, 1933) notes that in all forms of Bright's disease regressive changes occur in the epithelium of the convoluted tubules; this cell destruction varies in degree in the various types of the disease, but is always sufficient to require repair; in some instances this epithelial regeneration is normal in type, in others, abnormal in type. The question is, therefore, what part the epithelial dysfunction of the tubules plays in the production of renal failure. In the author's experiments, nephritis was produced in guinea pigs by two toxic substances—corrosive sublimate and uranium nitrate. The nephritis produced by sublimate poisoning was identical with the lesion found in man, and the regenerating tubular epithelium, although showing certain abnormalities, became entirely normal. After uranium poisoning, a development of connective tissue occurred that produced a renal lesion analogous, in part at least, to chronic Bright's disease in man. In such kidneys, the regenerated tubular epithelium remained immature and morphologically atypical, as in the analogous lesion in man. The animals died of renal failure. In both forms of renal damage the early regenerated epithelium showed only a small amount of mitochondrial substance in irregular arrangement. In the mature regenerated epithelium of the completely repaired kidney of corrosive sublimate poisoning, with normal function, normal mitochondria were present. But in the lesions of uranium nephritis in which renal failure developed, the mitochondrial elements remained immature. Staining tests with mercurous nitrate showed that the atypical regenerated cells, poor in mitochondrial substance, contained little or no urea, indicating that these cells failed to handle urea in the same way as normal epithelial cells with a complex "mitochondrial apparatus." The conclusion drawn from these findings is that tubular dysfunction "plays a not unimportant part in the development of renal failure in terminal hemorrhagic Bright's disease; a statement that sounds all the more remarkable if the term 'chronic glomerular nephritis' is used to designate this condition."

COMMENT: *The selective action of two mineral poisons, one for the tubular epithelium and one for the connective tissue, is significant on account of modern advances in the knowledge that toxins are undoubtedly produced in the body whose nature is still far remote from our ken. The day will come when the organic and biologic chemistry of these toxins will be known and combated with progressive success. That knowledge will include many unknown causes of renal and other organic disease. Infection in that day will include the presence of these toxins in the urine even though bacteria and pus as such may not be constantly found.* *V. C. P.*

Cancer of the Prostate

G. G. Smith of the Massachusetts General Hospital (*New England Journal of Medicine*, 208:57, Jan. 12, 1933) concludes from his experience with the treatment of cancer of the prostate by deep Roentgen-ray therapy, radium, and surgery, that in early cases total prostatectomy should be done; if the diagnosis is uncertain, the prostate should be exposed perineally and a piece removed for immediate diagnosis; whether total or partial prostatectomy should be done depends upon whether malignancy is found or not. In cases too advanced for radical operation, obstruction should be relieved by an intra-urethral operation, if possible; if not by partial perineal prostatectomy or permanent suprapubic cystotomy. Deep X-ray therapy should be used to relieve pain from metastases; X-ray therapy or small doses of radium may be used to retard the growth of the prostatic tumor, as from 5 to 10 per cent. of prostatic carcinomas are radiosensitive. The use of large doses of radium for the purpose of destroying the cancer has given very disappointing results in the author's experience. Of 42 cases in which total prostatectomy was done, 3 died postoperatively, 18 died of cancer, 4 are living, but with recurrence or metastases; and 17 are living and apparently well; of these 6 have lived more than three years after operation; 2 four to five years and one over five years.

COMMENT: *The one great bar to decision as to the value of X-ray and radium in prostatic cancer is that the lesion is seen usually long after the cancer has both mass and infiltration and too often after ulceration and hemorrhage are present. At this period irradiation is disappointing because mature cancer cells are relatively resistant, whereas the young cells are susceptible. One of the great functions of the X-ray is to attack the young cells as they extend into metastases but before the node as such has mass and infiltration.* *V. C. P.*

J. F. McCarthy and S. E. Kramer (*American Journal of Surgery*, 19:209, February, 1933) emphasize the importance of early diagnosis and treatment of "low-grade prostatitis" in the prophylaxis of prostatic cancer. By thorough diagnostic study in cases with symptoms of prostatitis, a prostatic cancer may be discovered in its early stages, when the growth is still within the capsule; in such cases radical perineal prostatectomy by Young's method is indicated. In the more advanced stages of prostatic cancer in which eradication of the growth is impossible, modern palliative measures can give the patient a degree of comfort and earning capacity not possible previously. For the removal of obstruction, the radio cutting current with a wire loop is used transurethrally, by the method previously described by the authors; this is supplemented by deep X-ray therapy to control pain.

COMMENT: *The response to physical therapy by prostatitis is the chief distinguishing mark between those grades of the disease which are functional and those which forerun organic disease of serious type such as surgical hypertrophy and malignancy. In this form of early management faith cannot be placed in one method such as massage or diathermy. The probability of cure in the functional cases and possibility of real benefit in the hypertrophic cases rest on careful selection and application of many methods and their sequences. Cases resisting this policy may be regarded as serious in their immediate and final meaning.* *V. C. P.*

Conservative Treatment of Hydronephrosis

W. Walters (*Journal of Urology*, 29:121, February, 1933) advocates conservative operations in the treatment of hydronephrosis in cases where there is sufficient renal parenchyma that is functioning normally to justify the preservation of the kidney. In cases in which the pelvis is considerably dilated and the laterally situated ureteral orifice has collapsed, he has found that resection and removal of the hydronephrotic portion of the renal pelvis has given excellent results. He reports 2 illustrative cases of extensive bilateral hydronephrosis with infection, in which complete relief of symptoms followed bilateral resection of the renal pelvis; the pelvis and calices returned to normal size; improvement has been maintained in one case for three and a half years and in the other almost two years. In other cases the obstruction can be removed by the operation of ureteropyelostomy, *i.e.*, anastomosis between the dependent portion of the renal pelvis and the ureter; for successful results with this operation the anastomosis between the cut end of the ureter and the opening made in the pelvis must be accurate, without any redundant portion of the ureter extending into the pelvis. In still other cases, division or removal of bands or sheaths of connective tissue that hold the ureter against the side of the pelvis is sufficient to allow the ureteral orifice to assume the normal position and permit the distended pelvis to empty itself. The choice of procedure in each case must depend upon the surgeon's wisdom and experience; in some bilateral cases different procedures may be used for the two kidneys. The best operation is that which completely relieves the obstruction with minimal disturbance of the pelvic and ureteral tissues. While a conservative operation is often indicated in unilateral cases with functioning renal parenchyma, it is more definitely indicated in bilateral cases, and is, of course, essential with a solitary kidney.

COMMENT: *The recovery power of the kidney as soon as its hydraulics are freed of obstruction and its physiology of infection is a well established fact. Conservative restoration of drainage of the pelvis recalls the results of the remarkable*

(Concluded on page 123)

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Social Diagnosis

Doctor Francis M. Pottenger, speaking as the retiring President of the American College of Physicians, urged physicians to participate actively in the revamping of our "admittedly unsatisfactory economic system." He said, very truly, that the position of the medical profession in society tends to become more and more insecure because it is attempting to carry out the principles of altruism and to follow high traditions in a competitive age which is characterized by uncontrolled ambition for profits. Finally, he submitted the following startling idea: "Were business concerns to adopt the altruistic spirit of physicians and take fewer profits or no profits at all from those who are unable to pay for their goods, it would soon change the ruthless psychology which dominates modern economic life."

Thus the medical mystic faces the hard-boiled uplifter who would dragoon him intensively into the service of mere profiteers. Has such an idealist a chance? He is like Paul before Agrippa. Can he persuade Cæsar to be decent?

Socialize the medical profession and society will see the last of that precious spirit to which Doctor Pottenger draws the attention of a sadly muddled world.

The Chickens Come Home to Roost

In a recent address, Supreme Court Justice Philip J. McCook made a good diagnosis of the conditions now ailing society and medicine and discussed the etiology with great perspicacity. Preceding the panic of 1929 manufacturers, wholesalers, retail merchants and brokers were selling inferior goods, using quantity production at the expense of quality and failing to investigate properly the securities they marketed. Bankers were speculating under the guise of high finance and covering their operations by new and unheard-of complexities; corporate heads were diverting their energies from efficient administration to stock selling. Now the merchants and brokers have lost their customers, the manufacturers and other advertisers their market, the lawyers their clients, the doctors their patients, the workmen their jobs. As for the banks, the multitude of sober-minded, honest and conservative bankers stood aghast at the damage to the reputation of the whole banking system done by the plungers and the false prophets among them.

The irony of it is, as far as the medical profession is concerned, that a remedy is now put forth for the evil results of greedy individualism which itself represents the quantity production doctrine of the Filenes and other uplifters applied to medicine.

Doses

Therapeutic agents, as drugs, serums, vaccines, radiant energy, heat, cold, exercise, rest, recreation, are given in time-quantities, that is, doses. These doses have more or less definite ranges. In determining the particular dose three factors have to be taken into account, viz.: the average physiological effect of the agent as known, the average effect as modified by the personal equation, and the average effect thus modified, as further modified by existing pathology and pathological physiology. In practical prescribing a tendency to overdose is often observed. The urge to do it himself instead of letting nature do it or a desperate condition may impel the physician to give larger doses than the situation warrants. The rule should be, not the largest dose which the patient can stand, but the smallest dose that will serve the purpose.

E. E. C.

The Physician's Investments

Every physician has had a good opportunity to study the financial condition of his patients during the past three and a half years. He has seen fortunes dwindle; he has seen his own securities go to almost nothing; he has seen many of his own profession suffer as a result of this economic war. The suffering from this economic war has been far greater than that of any other kind of war we have ever had.

It is a good time to meditate. What shall we do in the future? What procedure could we have followed in the past to make us secure? In the writer's experience he has seen three persons who are reasonably safe. One had his money in several savings banks; another had nothing but government bonds in his safe deposit box; still another held nothing but small mortgages on small homes, never allowing a large sum on any property: his only mistake is that he did not require five per cent to be paid yearly on the principal.

It would seem that a safe policy for a physician would be to have at least fifty per cent of his fortune in U. S. government bonds; twenty-five per cent in the best bonds, following Moody's ratings, and the remain-

der in speculative stocks (if his urge for "the street" be typically irresistible), in a well diversified list including utilities, insurance, banks and foods. To be quite safe have seventy-five per cent in U. S. government bonds, fifteen per cent in bonds and ten per cent in speculative stocks, of the better grade.

Without doubt, in the long run, those who have had trust funds guided by a good bank have fared better than those executed by the individual.

M. W. T.

A Cure (?) for Boredom and Depression

In the case of many physicians the Great War released unsuspected energies and emotions. They found a noble exaltation in the work that they were called upon to do. Today these same physicians often complain that they are uninspired and discontented and long for experiences that will once again lift them out of commonplace ruts, dispel disgust with the present régime, and stir the old spirit of exaltation again.

So much for the spirit of war. Can peace ever satisfy the spiritual libido as well? In Italy and Russia and Germany the "religions" of fascism and collectivism are so satisfying it. Both in war and in such peacetime manifestations as we have cited it is congenial dictatorship that enlists patriotic fervor—truly a pleasant tyranny for certain of our emotionally starved ones.

Would our discontented doctors warm to a thoroughly congenial peacetime dictatorship taking carefully into account the basic American credo? What, short of war itself, is more likely than new gods to cure all boredom and depression? What a complete relief it would be to our friends who are so harassed by their world as it is today.

Miscellany

Our Bodies

To the average urban American, the body is a lump of flesh to be deposited at a desk at nine in the morning and taken home again at night, bundled up in overcoats, laced into shoes, and poured into stiff shirts. The nerves and the mind (such as it is) make all the decisions, run all the races. The body, battered into insensibility by the unrelenting pressure of noises, sights, and smells, drags through the days and sinks at night into a sleep of exhaustion that eight years, let alone eight hours, could not wipe away. The Victorians, in their most prudish days, never achieved a more complete separation of body and mind than modern city civilization has unwittingly produced. The urban American is never aware of his body until it gets sick and causes pain. The play of muscles, the satisfaction of controlling and using a delicate, coordinated physical machine—these are pleasures quite remote from the temper and tempo of our life. And D. H. Lawrence was not mistaken when he told us, in no uncertain terms, that even the sex life of moderns is a mental affair. It has more to do with the theories of Freud than with the satisfaction of physical emotions. The fact that we have made no provision for allowing the body to function as it should does not mean that we have done away with the need for it. Since we have no time for any pursuit which does not pay a living wage, those of us who are not professional athletes must get the pleasure of physical control vicariously, through watching the acrobats who crowd our vaudeville stages or, more rarely, the dancer who uses his body as a medium of art as well as a physical machine.

* * *

The body, as a friend of the Drifter's recently remarked, is all we have. To have created a civilization which is inimical even to mere physical health, not to mention the more subtle satisfactions of physical expression, is surely one of the less amusing ironies in the history of human achievement.

—*The Nation.*

Political Medicine

The Journal has commented frequently and hopefully on the studies that have been made during the past five years by the Committee on the Costs of Medical Care. We believed that out of all the effort and expenditure involved there would surely come some solution of the twofold problem presented by the inability of a majority of people to pay present high costs for the cure of illness, and the collateral inability of doctors to earn incomes commensurate with the expense of their training.

But the mountain has labored in vain; it has brought forth a mouse.

As its major conclusions, the committee recommends, first, "that medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists and other associated personnel . . . organized, preferably around a hospital, for rendering complete home, office and hospital care"; and, second, "that the costs of medical care be placed on a group-payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods."

In other words, state medicine.

This is the report of the majority of the committee. It is combatted by a vigorous minority, which quite rightly points out that "there is nothing in experience to show that it is a workable scheme or that it would not contain evils of its own which would be worse than those it is supposed to alleviate. Above all there is no evidence to prove that it would accomplish what ought to be the first object of this committee, the lessening of the costs of medical care."

The medical profession has itself long stood in fear of the introduction of state medicine, with the building up of yet another bureaucracy to dictate its every action. The public has even greater reason to fear such a system. Already, according to the committee's statistics, taxation pays fourteen per cent of the nation's total bill for medical care—$514,500,000 out of $3,647,000,000. It is not difficult to conceive that a medical bureaucracy might rival the public-school system, or the Army and Navy, in its demands for tax funds.

Health insurance should be voluntary, according to most of the members of the committee, though a minority is for the immediate introduction of compulsory insurance. For the benefit of those people who could not afford to pay for insurance, it is suggested that "communities may well use tax funds," and if the community cannot pay "the committee recommends state financial aid."

And, perhaps in recompense for this tax-fund assistance, it is suggested that the hospital board to direct the general policies and assume responsibilities for the finances of the medical center might be "elected by popular vote like school boards, or appointed by municipal or county officials." Thus creating more political jobs, and quite likely in the end making the health of voters dependent upon regularity in support of the political boss.

Meantime, what would become of those doctors who were not included in the medical-center staff? Some, of course, could continue to count upon the loyalty of patients who willingly or unwillingly would thus pay a double cost for medical care. But other physicians, forced outside the political pale, would surely find themselves dubbed as quacks, however reputable their practice might continue.

The committee was supposed to find some way by which more adequate medical care might be made available to the public at lower cost, but nothing the majority has proposed even points the way. Far better the recommendations of the minority of the committee, who propose "that government competition in the practice of medicine be discontinued and that its activities be restricted to the care of the indigent and of those patients with diseases which can be cared for only in governmental institutions; to the promotion of public health," and to the care of the Army, Navy and veterans having war-connected disabilities.

And, of even greater importance, "The minority recommends that united attempts be made to restore the general practitioner to the central place in medical practice."

"We are opposed," says the minority report, "to all forms of medical practice which make it difficult or impossible to maintain the personal relationship of physician and patient. Neither do we agree with the majority that savings in the cost of medical care are to be made by eliminating the general practitioner or submerging him in a group. . . . In a group the general practitioner tends to disappear. The great majority of illnesses and injuries (about 85 per cent) are of such nature that they can be treated efficiently by any able practitioner with very simple equipment."

—*Ladies' Home Journal.*

Contemporary Progress

(Concluded from page 120)

work of Hunner by dilatation of the ureter in seemingly hopeless cases. Abolition of infection is quite another matter. It should never be neglected but it is apt to be so neglected after the recovery from operation. As a matter of fact such infection is the real disease and the renal condition its chief development. *V. C. P.*

Autovaccination in Conservative Operation for Renal and Ureteral Stone

E. Jeanbrau (*Zeitschrift für urologische Chirurgie*, 36:188, Jan. 13, 1933) notes that if a nephrectomy or ureteronephrectomy is done in cases of renal and ureteral stone with infection there is little danger of infection of the wound, as the kidney is removed as a closed sac. But if the more conservative operation of ureterotomy or pyelotomy is done, there is danger of infection through the escape of infected urine or pus. For this reason, the author has made it a practice to make cultures of the urine obtained by catheter, and to prepare autogenous vaccines from these cultures in every case of renal and ureteral stone in which the conservative operation is to be done. The vaccines prepared are of three types. A vaccine for subcutaneous injection contains 4 millions of each organism per c.c.; an antivirus prepared from cultures on a non-peptone medium and filtered (Besredka's method) for local application to the wound; and if the colon bacillus or the enterococcus is present, a vaccine for administration by mouth is also prepared by the method of Lumière and Besredka. The first vaccine is given subcutaneously for five injections at four day intervals prior to operation; the administration of the buccal vaccine, if indicated, is begun five days before operation and continued for eight or ten days after operation. The antivirus is poured into the operative wound at the time of operation, and subsequently injected gently through the drainage tubes. While this plan involves a pre-operative preparation of twenty days, the results have been so satisfactory that this delay in operation does not appear to offer a valid objection. Since the author has used this method for more than two years, all his infected cases of renal and ureteral stone operated conservatively have recovered without complications.

COMMENT: *The work in bacteriophagy in many diseases in man and animals in scattered laboratories and countries of the world reopens the whole field of artificial protection, whether it should be called immunity or not. The contribution of Jeanbrau as to three types of vaccine of different preparation and administration may be a long step forward in combating urinary infections of troublesome type as far as the wound is concerned. He seems to be deficient in his attention to the main focus of origin of the infection. The prevailing tendency, on the authority of gastro-enterologists, is to regard many of these difficult infections as of intestinal origin. Hence that tract must always receive great attention.* *V. C. P.*

Renal Sympatheticotonia

A. Harris (*Medical Times and Long Island Medical Journal*, 61:33, February, 1933) states that he has seen a number of cases in which there were repeated attacks of severe renal colic, but careful urological and radiological examination showed no evidence of obstruction, stone, or other renal pathology. In some of these cases pituitrin and enemata relieved the pain more permanently than narcotics. In one case mixed gland therapy, including whole pituitary substance, thyroid extract and ovarian substance, has entirely relieved the patient's symptoms. In some cases of this type, sympathectomy is the only means of permanently relieving renal colic; this operation appears to have "a definite and growing place" in urologic surgery. The author has performed this operation in 2 cases with frequent severe attacks of renal colic without organic pathological lesions, and in both the pain has been completely relieved. In one case decapsulation was also done.

Acute Ureteral Obstruction

N. F. Ockerblad. (*Journal of Urology*, 29:29, January, 1933) notes that acute ureteral obstruction is not a common condition; he has seen but 27 cases in a period of sixteen years in more than 10,000 cases in which cystoscopy has been done. The characteristic symptoms are pain and the presence of urine under pressure in the ureter. Chills or chilly sensations may be present if there is any infection. The relief of pain is immediate on draining off the urine with the ureteral catheter. The author notes that while instrumentation is generally considered to be contra-indicated in acute pyelitis, in cases with acute ureteral obstruction delay in instrumentation is by far more dangerous.

COMMENT: *The work of Harris and Ockerblad is somewhat similar in suggesting the probable value of careful dilatation of the ureters up to 10 F when possible. It is at least thinkable that it would render less effective of trouble the normal narrowings of the ureters. Certainly dilatation will do no harm and may in many cases avoid major surgery of the sympathetics. Such surgery is always in reserve in all circumstances of negative results.* *V. C. P.*

Pediatrics

Convalescent Serum and Adult Blood in Measles, Chickenpox, Mumps, and Whooping Cough

J. M. Lewis and L. H. Barenberg (*New York State Journal of Medicine*, 33:97, Jan. 15, 1933) report the use of convalescent serum and of normal adult blood (usually parental blood) in the prophylaxis of measles, chickenpox, mumps, and whooping cough. In measles, convalescent serum protected 73 per cent. of children entirely, and markedly attenuated the disease in the great majority of the remainder. When convalescent serum was not available intramuscular injections of normal adult blood were given; this was less effective as a prophylactic, giving absolute protection in only 23 per cent, but the disease was markedly attenuated in over 50 per cent. of the remainder. Convalescent serum of chickenpox was not available, but a few infants given 40 c.c. of normal adult blood were entirely protected; and those given 30 c.c. developed a mild form of the disease. Convalescent serum protected 85 per cent. of the children given injections, and the course of the disease was mild in the 15 per cent. who had mumps; for complete protection 12 to 15 c.c. of serum should be given. In a few cases in which injections of adult blood were given children exposed to whooping cough, none were absolutely protected, but in all the course of the disease was definitely milder than in the non-treated cases; the results were superior to those obtained with pertussis vaccine. The authors conclude that if complete protection against measles, chickenpox, or mumps is desired, convalescent serum should be given when it is available. If this is impossible, normal adult blood or serum should be given, as this gives absolute protection in a considerable percentage of cases and definitely attenuates the disease in the majority of cases. Adult blood is also of value in modifying the course of whooping cough.

Diphtheria and Diphtheria Carriers in Children's Hospitals

S. C. Peacock and M. Werner (*American Journal of Diseases of Children,* 45:279, February, 1933) in a study of diphtheria and diphtheria carriers at the Children's Memorial Hospital of Chicago, find that routine bacteriological examinations of 8,282 patients from the Hospital dispensary showed 407, or about 5 per cent., "positive" for diphtheria bacilli. Of these, 251 cultures were isolated on subcultures of which 66 per cent. were virulent and 34 per cent. were avirulent. In another control series of 1,008 children examined before tonsillectomy, 5 per cent. gave cultures positive for diphtheria bacilli, 64 per cent. of which were virulent. Examination of patients in the Hospital showed that approximately 33 per cent. of all cultures reported as positive for diphtheria bacilli on admission were virulent; while nearly 66 per cent. of positive cultures were virulent that were obtained from patients "negative" on admission but re-examined because suspected of being carriers or of having diphtheria. The authors believe it is practical to abolish the routine of taking cultures for diphtheria bacilli on admission of children to the hospital, and to make local clinical conditions the sole criterion for culturing for diphtheria. No diphtheria or cultures positive for diphtheria were found in 68 families investigated to which children who had developed diphtheria or positive throat cultures in the Hospital had been discharged. This indicates that the requirement for two consecutive negative cultures for diphtheria bacilli prior to discharge of such patients is "reasonably satisfactory."

Dysentery as a Cause of Sudden Death

E. Harvey (*Lancet,* 1:190, January 28, 1933) reports 4 illustrative cases in infants and young children showing that death may occur suddenly in dysentery infection with few or no symptoms. In 2 of these cases there was no diarrhea; in one of these there was severe vomiting; in the other the child died in his sleep; in the other 3 cases there was diarrhea of sudden onset with vomiting in two cases, followed by collapse and death. All of these cases came to autopsy and the most striking pathological finding was the presence of a ring of lymphoid hyperplasia and edema around the ileocecal valve, which in several of the cases extended for several inches into the ileum and the cecum. Cultures from the mucosa and contents of the bowel were negative for any organism of pathological significance, but this may be attributable to the fact that autopsy was not done until the second or third day after death. In one of the cases, a sister had had dysentery at the same time, and *B. dysenteriae* Sonne was isolated from her stools; so that in this case the infecting organism was probably of the Sonne type. The author notes that it is recognized that in certain cases of dysentery due to the Shiga and Flexner type of organisms, the toxemia may be overwhelming and cause an early fatal termination, but such sudden death has not been previously noted in the Sonne type of infection. Also that death may be due to dysentery infection without the appearance of the cardinal symptom of diarrhea does not seem to have been noted previously. This possibility should be considered in cases of sudden death in children.

Raw Apple Diet in the Treatment of Diarrheal Conditions in Children

T. L. Birnberg (*American Journal of Diseases of Children,* 45:18, January, 1933) notes that raw apples have long been a popular treatment for diarrhea in children in Germany, and that their use has recently been advocated in medical literature. The author has used scraped raw apple in the treatment of 70 cases of diarrheal conditions in children. Completely ripe and mellow fruit is used, scraped to a pulp with a knife or with a grater. From one to four tablespoonfuls or more of this pulp is given every hour or two for forty-eight hours; weak black tea may be allowed in small amounts if the patient craves liquid; in some cases banana pulp may be added to the apple. After the forty-eight hour period cooked cereal without milk, toast, potato gruel, scraped beef and cocoa made without milk (according to the child's age) are added to the diet; milk is not given for another forty-eight hours. Of the 70 cases treated, 38 had enteritis, 20 parenteral dyspepsia, 7 dyspepsia of dietetic origin, and 5 had subacute colitis. The chief symptoms were fever, frequent loose stools, and abdominal pain, and in some cases toxicosis and convulsions. Excellent results in the early stages and permanent relief of the symptoms were obtained in 88 per cent. of these cases with the use of the raw apple diet. Some of the failures were due to lack of co-operation on the part of the patient or the mother in carrying out the treatment. The action of raw apple in diarrheal conditions depends upon a number of mechanical, physiological and chemical principles; its inhibition of intestinal peristalsis accounts in part for the therapeutic action. Another important factor is its maintenance of nutrition and its power of preventing loss of water. Practically the treatment is effective, safe, pleasing to the patient, and economically reasonable.

Duodenal Ulcer as an Etiological Factor in the Pylorospasm of Infants

P. Bode (*Monatsschrift für Kinderheilkunde,* 55:395, Jan. 13, 1933) reports a case of pylorospasm in an infant who died at two months of age; autopsy showed the presence of a duodenal ulcer, which had apparently developed prior to the pyloric hypertrophy and spasm. From his study of this case, and from other cases reported in the literature, the author concludes that the presence of duodenal ulcer in the early months of life is the cause of pylorospasm in some cases. The presence of blood in the vomitus and in the stools in pylorospasm indicates the possibility of a duodenal ulcer as the underlying etiological factor. While it is true that in some cases primary duodenal ulcer may occur in infancy and may be the cause of the development of pylorospasm, it is also true that a primary condition of spasm at the pylorus may favor the development of duodenal ulcer by its effect on the local circulation. The association of these two conditions in infancy may be considered as a "vicious circle."

Dental Caries

M. C. Agnew, R. G. Agnew and F. F. Tisdall (*Journal of Pediatrics,* 2:190, February, 1933) report animal experiments in which it was found that in the rat an adequate supply of phosphorus is an important factor in the prevention of dental caries; an adequate supply of vitamin D may prevent or delay the onset of dental caries. In a study of 350 children for a year, some of whom were given vitamin D in addition to a diet adequate in all respects, including phosphorus, it was found that in the children who had been given vitamin D there was a lessened incidence of caries as compared with those on similar adequate diets without vitamin D. Moreover, in the children given the vitamin D, previously existing cavities had been largely arrested, and in certain of these cases definite hardening of the cavity walls was evident. The general tone of the gingivae and of the mucous membranes of the mouth in these children also showed definite improvement as compared with the children not given the additional vitamin D.

Breech Presentations and Their Delivery

According to W. E. Studdiford, New York (*Journal A. M. A.,* Nov. 26, 1932), breech presentations constitute about 3 per cent of all deliveries according to many authorities. Since 1920, this small group of cases has been the subject of many investigations all over the world. This interest has been aroused mainly by the work of Holland, who called attention to the great frequency of death from birth trauma among babies born with a breech presentation, and by the realization that these deaths were not in the main due to asphyxia. The exact estimation of the fetal mortality due solely to breech presentation and delivery is difficult. The principal factors which render it difficult are that about 25 per cent of these babies are premature, weighing under 2,000 Gm., or are macerated; that a large number of fetal anomalies inconsistent with life occur in this group; that a certain number of cases are complicated by placenta praevia. Prolapse of the cord is about ten times more frequent with the breech than with the vertex presenting. With various standards of correction, the fetal mortality directly attributable to the presentation has been estimated to lie between 6.2 and 16.4 per cent. The anatomic causes of death are well known and consist of intracranial, spinal, intra-abdominal and other traumatic lesions. Such lesions are found in the vast majority of infants who die during or shortly after delivery. In thirty-two autopsies performed at the Sloane Hospital, 6.25 per cent showed anomalies incompatible with life. Of the remainder, only 6.5 per cent failed to show a serious traumatic lesion. In an effort to cut down the incidence of such injuries, three lines of procedure have been followed. The first and possibly the most important part lies in antepartum. The second lies in the proper conduct of labor and a sound technic in surgery. Finally, there is a certain small percentage of cases in which a cesarean section is indicated. The accurate estimation of fetal size especially in a breech presentation, is a difficult matter. Roentgenographic examination is often of great assistance and would be more so if a reliable method could be developed for measuring the baby and the pelvis by means of roentgengrams. The indications for intervention should be failure of labor to progress and evidence of fetal distress. Although many fewer spontaneous deliveries are seen at Sloane Hospital, intervention in breech deliveries has been reduced as much as possible. The breech is allowed to be born spontaneously, light anesthesia being given with the pains.

MEDICAL BOOK NEWS

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All books for review and communications concerning Book News should be addressed to the Editor of this department at 1313 Bedford Avenue, Brooklyn, New York.

APRIL, 1933

REVIEWS

Psychiatry and Mental Health

PSYCHIATRY AND MENTAL HEALTH. By John Rathbone Oliver, M.D., Ph.D. New York, Charles Scribner's Sons, 1932. 330 pages. 12mo. Cloth, $2.75.

The author is a clergyman, a physician and a psychiatrist. He has had experience in psychiatry at the Johns Hopkins Medical School. He is a practicing psychiatrist, and has also been a professor of medical history at the University of Maryland.

Naturally a man with such qualifications is expected to write something unusual and most interesting, and such is the case of this book. As a whole one can say that while the author has written primarily for theologians, social workers, and laymen, the general practitioner will find the book an excellent presentation of the various types of abnormal behavior and suggestions as to their management. The psychiatrist likewise, will find this book a most valuable addition to his library.

IRVING J. SANDS.

Orthopedics in Childhood

ORTHOPEDICS IN CHILDHOOD. By William L. Sneed, M.D. Philadelphia, J. B. Lippincott Company [1931]. 318 pages, illustrated. 12mo. Fabrikoid, $5.00. (Everyday Practice Series).

This book is one of a series on popular medical problems edited by Dr. Harlow Brooks in the Every Day Practice Series. The purpose of this book, like others of the series, is to present to the physician reliable medical facts in one specialty or another. It is not in any sense a full text on orthopedics and should not be considered as such. Early diagnosis is stressed by the author in order that the physician may recognize orthopedic conditions in the young. The principles of treatment are set forth but recognition of the conditions rather than treatment is the main purpose of this work.

JACQUES C. RUSHMORE.

The Human Voice

THE HUMAN VOICE. Its Care and Development. By Leon Felderman, M.D. New York, Henry Holt and Company, [c. 1931]. 301 pages, illustrated. 12mo. Cloth, $2.50 .

The book, as we see it, is little more than a hurried compilation of data most of which has little relationship to the subject. Numerous references are ambiguous and some are so muddled as to be misleading.

It was obviously written for the laity, but we doubt if either the student of voice culture or the teacher will find much of practical value within its covers.

The author's style is monotonous and his repeated disregard of good English is flagrant.

HARRY MEYERSBURG.

Formulaire Bouchardat

FORMULAIRE BOUCHARDAT. By A. Desgrez and F. Rathery, Paris, Felix Alcan, 1932. 986 pages. 16mo. Cloth, 40 Fr.

This is the thirty-seventh edition of the formulary of Bouchardat to be printed during a period of ninety years. It is unusual in its arrangement in that the medicaments are arranged not alphabetically, but according to their properties. Thus, for example, the doctor may find all drugs and formulae with diuretic properties grouped in one section.

There are sections on physiotherapy, biotherapy, organotherapy and dietetics. The latter includes considerable material on the management of the diabetic.

The formulary of Bouchardat really constitutes a valuable compendium on pharmacology and therapeutics.

E. P. MAYNARD, JR.

Formulaire—Consultations Medicales Et Chirurgicales

FORMULAIRE. Consultations Medicales et Chirurgicales. By G. Lemoine, E. Gérard and others. Eleventh Edition. Paris Société de Publications Scientifiques et Médicales, 1932. 1170 pages. 16mo. Fabrikoid, 50 francs.

This is the eleventh edition of the formulary first published in 1905. The first part of the book contains the medicaments arranged alphabetically, from which the authors state, many old and useless drugs have been omitted and to which the new advances in therapeutics have been added.

The second part is made up of medical and surgical consultations, that is, short descriptions of the more common diseases and surgical conditions, with considerable space devoted to their proper treatment.

This work should serve as a valuable handbook to the general practitioner.

E. P. MAYNARD, JR.

Elementary Psychology of the Abnormal

An ELEMENTARY PSYCHOLOGY OF THE ABNORMAL. By W. B. Pillsbury. 1st edition. New York, McGraw-Hill Book Company, Inc., 1932. 375 pages, illustrated, 8vo. Cloth $3.00.

The author is chairman of the department of psychology at the University of Michigan. He has recognized the importance of abnormal psychology in modern life. He recognizes the multiplication of theories that try to explain the deviations from rational behavior. He appreciates that these theories have spread beyond the professional circles and are of interest to non-medical professions. He has, therefore, written a book to give the laymen and college students an account of the aspects of abnormal life that are likely to affect or interest them. He outlines the various theories that have been offered to explain the different types of abnormal behavior. He has abstracted interesting histories from different text books to illustrate his points of view.

To one who has worked for twenty years in the field of neurology and psychiatry, there has been a growing conviction that there is much truth in the old saying, that a little knowledge may prove dangerous, and that there is a real question whether the college student is really benefited by a smattering of psychiatry and allied subjects. In fact, he has seen many instances where such meager information has proven quite dangerous and harmful.

Therefore, while there is still an insatiate desire for many laymen to delve into matters relative to the human "mind", Dr. Pillsbury's book will serve as a creditable presentation of the subject.

IRVING J. SANDS.

Milk Production and Control

WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION. Milk Production and Control. New York, The Century Company, [1932]. 392 pages. 8vo. Cloth, $3.00.

Well over half of this volume is devoted to Nutritional Aspects of Milk, and the section on Milk Control is told in ten pages, with scarcely a word about the control of nutritional factors.

In the brief chapter on control it states that "'pasteurization' control may be regarded as a necessary *final* public health safeguard to all general market milk supplies", but not a word is mentioned about the epidemics that have occurred where *properly* pasteurized milk has subsequently been contaminated by disease carriers. The ultimate protection of milk is not pasteurization (except in the final container) but proper and careful medical examination and inspection of all

employees engaged in this work, just the same as obtains in Certified Milk production.

In the chapter on "Diseases Transmitted through Milk", very brief mention is made of the tremendous efforts being put forth throughout the country to rid our herds of all animal diseases. This is the ultimate goal in the dairy industry, for who among us relishes milk from diseased animals even if it is Pasteurized? If pasteurization is sure death to all tubercle bacilli, why is there such an increasing demand for tuberculin testing and elimination of this disease from dairy cattle? Tubercle bacilli have been found in pasteurized milk.

The real body of the book on "Nutritional Aspects of Milk" furnishes a lot of solid information (often quoted) from various authors and in parts is highly technical and scientific.

For having brought so much information together on this subject, the volume is entitled to an honored place in any library. Each chapter ends with an extensive bibliography.

HARRIS MOAK.

Your Hearing: How to Preserve and Aid It

YOUR HEARING—HOW TO PRESERVE AND AID IT. By Wendell C. Phillips, M.D. and Hugh Grant Rowell, M.D. New York, D. Appleton & Company, 1932. 232 pages. 12mo. Cloth, $2.00.

This book was prepared for the guidance and information of the many people who have impaired hearing. In addition to serving this purpose admirably, we do not hesitate to recommend the reading of this book to physicians.

The otologist can well profit from this little book especially in his relations with the hard of hearing patient. It is not alone interesting but instructive and the subject is covered clearly and interestingly from etiology to lip-reading and hearing aids.

A most unique illustration is employed at the beginning of the book which demonstrates the conductive, receptive and interpretive functions of the ear.

SAMUEL ZWERLING.

ERDMANN'S CLINICS. Excerpts Selected from the Clinics of John F. Erdmann. By John F. Erdmann, M.D. Philadelphia. W. B. Saunders Company, 1932. 315 pages, illustrated. 8 vo. Cloth, $4.50.

This is a volume of 315 pages of text and index. There are 39 illustrations showing various surgical manoeuvres and conditions. The surgical pathology described include—Granuloma of the Gastro-Intestinal Tract, Polyposis of the Colon, Cancer of the Colon and Pancreatitis, these with other conditions are discussed in a concise, clinical manner; diagnosis, prognosis, and surgical treatment are also discussed. There is a brief discussion on the preoperative and post operative treatment in the beginning of the volume.

Dr. Erdmann has conducted his clinics for a great many years and his keen observation and long experience make any work of this type, originating in his clinic, well worth the consideration of the profession.

HERBERT T. WIKLE.

Modern Alchemy

MODERN ALCHEMY. By William Albert Noyes and W. Albert Noyes, Jr. Springfield, Ill., Charles C. Thomas, 1932. 207 pages, illustrated. 8vo. Cloth, $3.00.

The Table of Contents will serve to give a general idea of the scope of this book of 207 pages, inclusive of index. It is a beautiful specimen of the printer's art. There are seven chapters with the following titles:—

I. The Methods of Science; II. Atomic Structure; III. The Trans-Mutation of the Elements: The Philosophers Stone; IV. Valence; V. The Effect of Various Radiations on Chemical Systems; VI. The New Elements and Uses for Old Ones; VII. The Elixir of Life. Index. It is evident from the contents that general practitioners will hardly make use of such a book; but we can boast of many Colleagues in our laboratories of medical research to whom it must prove very interesting and illuminating. It belongs to large libraries of every description and should find a wide sale.

J. M. VAN COTT.

Rationeller Krankenhausbau

RATIONELLER KRANKENHAUSBAU. By H. Distel. Stuttgart W. Kohlhammer, 1932. 100 pages. 8vo. Paper, Marks 5.

This is a brochure of 100 pages with numerous illustrations and tables.

Contents:—Hermann Distel, Investigation of Cost of Hospital Construction; C. Ernest Block, Interim Report from Great Britain and Ireland; Edward F. Stevens, American Report; Hermann Distel and Edward F. Stevens, American Report of the Committee on Cost of Hospital Construction; Dr. Hans Frey, Size of the Hospital unit; Proceedings of the II. International Hospital-Congress Concerning the Report: Investigation of the Cost of Hospital Construction.

This report is valuable for hospital boards and directors of hospitals who are contemplating hospital construction. It is also interesting, as it affords evidence of a growing nationalism along altruistic lines.

J. M. VAN COTT.

Cultivating the Child's Appetite

CULTIVATING THE CHILD'S APPETITE. By Charles Anderson Aldrich, M.D. New York, The Macmillan Company, 1932. 137 pages, 12mo. Cloth, $1.25.

This is the second edition of this little work. A chapter is added to review any new ideas that have occurred to the author or others upon this all important subject. Stress is laid in not forcing the child to eat, but great reliance is placed upon a hunger-appetite reflex, as he terms it. In other words, hunger must be present first, then that the child satisfy this impulse. The stomach must, of course, receive only food that will leave it promptly, hence mastication, and proper preparation as well as selection of the food is necessary. Above all, mealtime should be an enjoyable affair for the youngsters. Squabbling, unpleasantries and the like are taboo at or near mealtime.

The book may well be read by any mother with young children. She will get good, conservative ideas on how to act toward her child with anorexia.

THURMAN B. GIVAN.

Recent Advances in Anaesthesia and Analgesia

RECENT ADVANCES IN ANAESTHESIA AND ANALGESIA. By C. Langton Hewer, M.B., B.S. Philadelphia, P. Blakiston's Son & Co., Inc., 1932. 187 pages, illustrated. 8vo. Cloth, $3.50.

It could be said of a "recent" book that it is "timely"; yet that would mean only relation to the reader's immediate necessity for knowledge. An author might be "way behind the times", but the newness of the information to the reader might make it seem recent. Nor would one expect recency to include all that was really new, for there is a limit both to the acquisition and the publishing of the new. The author has apparently chosen a period of the last five years as the time of the recent information to which he invites attention. His 350 odd references are well within that time; and he has succeeded in capturing his information from all over the world—from Asia to America, and from Norway to Italy. His seven appointments in London and neighboring hospitals is a guarantee of his wide opportunity for experience; nor less does his membership in the Council of the Section of Anesthetics, Royal Society of Medicine give him a position of leader amongst our British colleagues.

The book at once attracts one's attention because the author limits it to a single purpose. It is, as it were, a circle in a circle. So many of the newer medical books are such. It is a microscopic vision rather than a telescopic or even the normal 20/20ths that is directed to modern knowledge now-a-days. At least we know what to expect—"not a text-book, but, to provide a concise collection of some of the important advances made during the past few years."

These are as follows:—the recognition of the skill required from the anesthetist; the contributions of Anesthesia to therapeutics; the part anesthetists have taken in inhalational therapy, and the perfection of metabolism apparatus; the renewed interest in endo-tracheal methods, in spinal anesthesia, avertin, ethylene, resuscitation, carbon dioxide, the relegation of ether to a subordinate place, and the insistence on the person both of the patient and the anesthetist.

A beginner could not begin to understand this book: it is too concise; he would not appreciate the ellipses necessary to keep it in small compass; the cross-references so admirably supplied would probably seem tiresome; the omission of the elemental information of rules and explanations would confuse him. It is a book for the matured specialist. He can make it a vade mecum.

A. F. ERDMANN.

Alcohol and Man

ALCOHOL AND MAN—The Effects of Alcohol on Man in Health and Disease. Edited by Haven Emerson, M.D. New York, The Macmillan Company, 1932. 451 pages. 8vo. Cloth, $3.50.

Medical research of the alcohol problem has unfortunately been as perplexing in its conclusions as its political counterpart. This most recent and ambitious undertaking of this unsatisfactory problem assures the reader of decisive results. The array of well-known contributors to this work should alone satisfy the reader that its solution is finally within realization, if for no other reason.

The contentions of these workers are quite uniform and are much the same as were taught us in our medical schools. However sound and authoritative this work may be, it does not represent a radical departure from our established attitude towards this problem. It moreover encompasses the discordant opinions of other schools of thought and finally leaves one with the impression that as long as alchohol will remain a social problem so long will medical men manifest their untiring interest in it.

EMANUEL KRIMSKY.

Sex and Internal Secretions

SEX AND INTERNAL SECRETIONS. Edited by Edgar Allen. Issued under the auspices of the Division of Medical Sciences of the National Research Council. Baltimore, The Williams and Wilkins Company, 1932. 951 pages, illustrated. 8vo. Cloth, $10.00.

This book was made possible by the special interest of the Bureau of Social Hygiene, who initiated a program of research under the guidance of the Division of Medical Sciences, National Research Council. It deals primarily with the manifold factors of internal secretion and their relation to sex problems. The genetic foundation for sex determination and differentiation is discussed by Lillie, Danforth and Bridges in individual chapters. The participation of internal secretions in extending or modifying the genetic control and the demonstration of the gonadokinetic action of various hormones are treated by such able pioneers in the research field as Hartman, Smith, Allen, Doisy, Hisaw, Engle, et al.

Stress is placed upon the experimental treatment of endocrine problems, many of which are fertile fields for study to date. Immense data is compiled here both for the physicians who are interested in fundamentals of sex functions in man, as well as for those who may be already engaged in investigations on this subject. The editor is to be complimented for the manner in which he has presented the subject. No chapter encroaches upon the other and although the book is an exhaustive survey of practically every endocrine experiment of the last ten years, there is no repetition and it exhibits an all around fine teamwork between the many contributors. A few of the chapters summarize their conclusions, which is of great help to the reader. It seems to us that this would have been a wise procedure to follow throughout the book, however, it is possible that this has been omitted due to the fact that so much of the evidence has been accumulating too rapidly to reach a definite conclusion so far. Each chapter is supplemented by an extensive bibliography.

JOSEPH KALDOR.

Epidemiology. Historical and Experimental

EPIDEMIOLOGY, Historical and Experimental. By Major Greenwood, F. R. S. Baltimore, The Johns Hopkins Press, 1932. 80 pages. 8vo. Cloth, $1.50.

This book comprises the three lectures delivered by the author as the twentieth course of lectures given under the Herter Foundation of the Johns Hopkins Hospital.

The viewpoints expressed, the method of study pursued and the conclusions arrived at are unusually interesting. The author believes we are only at the beginning of the long difficult road that it will be necessary for us to travel to learn even where the solution of the problems of human epidemiology should be sought. He does not agree that this science is a mere appendix of bacteriology and states clearly that the study of herd sickness cannot be satisfactorily pursued by looking only for the means of infection and the vehicles of infection. The study of the individual is not sufficient; we must learn the laws governing the spread of disease amongst the herd.

In the development of our knowledge of epidemiology the author pays tribute to the work of Graunt, Henle, Farr, Brownlee and Ross, and considers that statistical and mathematical methods of investigation are those which have been productive of much information. To this is now added the experimental method which he has adopted for his own study.

With a standard technique he has studied the phenomena of herd sickness among mice, and after an extensive and carefully planned piece of work extending over a period of years, he believes several conclusions appear to be warranted. The first is that so long as non-immune animals are admitted to a herd wherein infection has been a growing concern it is not likely that herd sickness will ever die out; secondly, that the course and scale of mortality are much influenced by the rate of addition, and thirdly, that the factors of diet and strain are not so potent in these animals as to deprive the experience derived therefrom of a reasonable analogy with what occurs in human communities. He also presents proof that animals immunized before exposure suffer a lower mortality than non-immunes but that in a herd recruited wholly from pre-immunized animals the disease does not die out.

The book is small, attractively bound and carefully and well printed.

JOSEPH C. REGAN.

One Hour of Medical History. Vol. 2

ONE HOUR OF MEDICAL HISTORY. Compiled by Benjamin Spector, M.D. Vol. II. Boston, The Beacon Press, 1932. 129 pages, illustrated. 12mo. Cloth, $1.00.

This is a continuation of the Medical Pageant which Spector, Associate Professor of Anatomy in the Tufts School, has cleverly created and directed. In this second volume will be found the students' dramatizations which have been presented before a number of enthusiastic medical audiences.

Another apostolic succession passes before our eyes: Moses, Galen, Avicenna, Leonardo da Vinci, Paracelsus, Antony van Leeuwenhoek, John Hunter, Claude Bernard, Florence Nightingale, Elizabeth Blackwell, and Marie Sklodowska Curie. The characters, "in person," speak their pieces in appropriate costume and makeup and tell of their researches and achievements. In the course of the actual production of the pageant the gaps between the stage characters are bridged by appropriate historical remarks.

Work such as this deserves high praise, for it makes the evolution of medical history vital, graphic and glamorous. The illustrations do justice to the characters and the book concludes with erudite notes by James F. Ballard, Director of the Boston Medical Library, on the texts dealing with the characters and their times and work.

There is a foreword by John Albert Cousens, the President of Tufts College, and an introduction by Charles F. Painter, Professor of the History of Medicine.

ARTHUR C. JACOBSON.

The Cambridge Medical School

THE CAMBRIDGE MEDICAL SCHOOL. A Biographical History. By Sir Humphrey D. Rolleston, M. D. Cambridge, Eng., The University Press. (New York, The Macmillan Company), 1932. 235 pages, illustrated. 8vo. Cloth, $5.00.

This is a beautifully printed volume of 235 pages and 21 portraits of such distinguished physicians as Johannes Caius, William Heberden, the elder, Sir George Murray Humphry, Professor Alexander Macalister, Professor Sir Michael Foster, Professor Sir German Sims Woodhead and Clifford Allbutt.

The book, while of necessity statistical in nature, is nevertheless written in such an attractive style as to be quite devoid of the dryness common to such undertakings.

The sketches of individual lives are indeed fascinating, and some of them quaint. Taken as a whole the book reminds one of Weld's "History of the Royal Society." It not only visualizes the great men in medicine who are identified with the famous medical school of Cambridge University, but it is also redolent of the culture which has existed in England since the thirteenth century days of Henry the Eighth, and offers ready reference for doctors who are interested in the history of medicine. It is well worth reading and possessing.

J. M. VAN COTT.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgement of receipt has been made in this column.

DISEASES OF THE EYE. By Hofrat Ernst Fuchs, M.D. The fifteenth German Edition of the Lehrbuch der Augenheilkunde as Revised by Maximilian Salzmann. Tenth English Edition, authorized translation by E. V. L. Brown, M.D. Philadelphia, J. B. Lippincott Company, [c. 1933.] 641 pages, illustrated. 8vo. Cloth, $7.00.

BIOGRAPHISCHES LEXIKON DER HERVORRAGENDEN ARZTE DER LETZTEN FUNFZIG JAHRE. Herausgegeben und Bearbeitet von Dr. I. Fischer. Volume 2. Berlin, Urban & Schwarzenberg, 1932. 800 pages, illustrated. 8vo. Cloth, Marks 42.

THE SCHOOL AND MENTAL HEALTH. By Clara Bassett. New York, The Commonwealth Fund, 1931. 66 pages. 8vo. Paper, 40 cents.

DIRECTORY OF PSYCHIATRIC CLINICS IN THE UNITED STATES. Compiled and edited by the Division on Community Clinics of the National Committee for Mental Hygiene. New York, The Commonwealth Fund, 1932. 165 pages. 8vo. Paper, $1.00.

DOCTORS CARRY THE KEYS. By Rhoda Truax. New York, E. P. Dutton & Company, 1933. 282 pages. 12mo. Cloth, $2.50.

A CRITIQUE OF SUBLIMATION IN MALES: A STUDY OF FORTY SUPERIOR SINGLE MEN. By W. S. Taylor. Worcester, Mass., Clark University Press, 1933. 115 pages. 8vo. Paper, $2.00. (Genetic Psychology Monographs, Vol. 13, No. 1.)

Coronary Occlusion and Fatal Angina Pectoris: Study of the Immediate Causes and Their Prevention

Greene Fitzhugh and Burton E. Hamilton, Boston (*Journal A. M. A.*, Feb. 18, 1933), selected, from their private consulting practice, a group of patients within a whole series classifiable under coronary disease associated with angina pectoris; namely, patients otherwise without disability who have angina pectoris on exertion or excitement but are able to carry on without angina while adhering to a reasonable regimen. They found that such patients, when they die, usually die in angina or following a coronary occlusion. More often than not, such fatal anginas or coronary occlusions were immediately preceded by unusual departure from ordinary habits of living, and these departures were usually preventable. The authors analyze the events that constituted departures from ordinary habits of living and that preceded coronary occlusion or fatal angina in their series of 100 selected cases. This analysis furnishes material for improved regimens which should be useful in avoiding or postponing coronary occusion and fatal angina.

Cancer of the Uterus

(Concluded from page 116)

The treatment with radium should always be done by one thoroughly familiar with radium and never by a novice. Patients should be carefully examined monthly for two years following treatment and during the next three years once in two to three months and yearly thereafter.

SUMMARY

1. Cancer of the cervix is the most common malignant disease of the pelvic organs.
2. Early treatment, careful gynecological examinations and thorough treatment are necessary.
3. The cause of cancer is not known but with the knowledge we have at hand mortality can be materially lessened.
4. Carelessness, incompetence, or exploitation of cancer patients are particularly reprehensible.
5. Adenocarcinoma is more resistant than epithelioma and both are more resistant during menstrual life.
6. Every cancer has its stage in which it can be cured, with our present knowledge.
7. Cancer of the cervix is a non-surgical disease, radium being the treatment of choice.
8. Radium should be used only by a competent gynecologist of considerable experience.
9. Large doses of radium may light up previous pelvic infection. Where there is such possibility the patient should be forewarned.
10. Radium treatment of cancer of the cervix should not be followed by surgery.
11. Cancer of the uterine body should be treated with radium followed by radical panhysterectomy.
12. Maximum radium dosage should be used and varied as the case indicates.
13. Careful follow-up examinations over at least a five-year period must be made.

265 Alexander Street.

Difficulties and Dangers of Forceps Delivery

E. D. Plass, Iowa City (*Journal A. M. A.*, Nov. 26, 1932), states that the application of forceps is the most important numerically of the various procedures aiming at delivery, since every physician who does obstetric work includes the instrument in his armamentarium and holds himself in readiness to assist delivery with its help, even though it may be the only surgical operation he is inclined to undertake. The procedure is also unique in that it is frequently performed under conditions which would be deemed a bar to satisfactory surgical measures of any other form. That the results are not more disastrous is a tribute to the patience and skill of the host of general practitioners throughout the country. Difficulties in forceps delivery ordinarily appear because the physician has not demanded fulfilment of the classic conditions for the safe application of instruments, namely: 1. The cervix must be fully dilated or easily dilatable. 2. There must be no disproportion between the head and the pelvis. 3. The position of the head must be accurately known, so that the blades may be applied in the biparietal diameter and rotation effected in the proper direction. 4. The membranes (bag of waters) must be ruptured. The author emphasizes that the difficulties and dangers of the procedure may however, be minimized by attention to the following general principles: One should use only recognized indications for forceps extraction. One should not be stampeded into thinking that it is a harmless operation. One should observe all asepic principles and remember that sepsis constitutes a real danger. The prerequisites for the proper application of instruments should be demanded: complete cervical dilatation, no disproportion, a correct diagnosis of the position of the head and a biparietal application of the blades. The instrument with which one is most familiar should be employed and one should remember that it is not so much the forceps as the man behind it that is important. Intermittent tractions should be employed, simulating the normal expulsive process as closely as possible, avoiding undue force. One should be prepared to do an episiotomy in order to avoid deep perineal lacerations.

Thirty-Fifth Annual Meeting of the Associated Physicians of Long Island

The thirty-fifth meeting of the Associated Physicians of Long Island was held in Brooklyn, Saturday, January 28, 1933. There was the customary morning and afternoon session of scientific papers, the business meeting, and the annual dinner.

The scientific session was provided through the courtesy of the Brooklyn Hospital on De Kalb Avenue at Ashland Place, the program of which follows:

11 A. M.—Clinical Pathological Conference in Medicine
Doctors Wm. H. Lohman, J. L. Moore, J. W. Denton.

3 P. M.—The Injection Treatment of Hemorrhoids
Dr. A. W. Marino

Present Status of Transurethral Prostatic Resection
Dr. N. P. Rathbun

Demonstration of a Drainage Material
Dr. J. E. Jennings

Nature and Uses of Bacteriophage Dr. L. Nerb

Rupture of the Uterus Following a Previous Cesarean Section Dr. J. Casagrande

The Rôle of Calcium and Vioserol in Pregnancy
Dr. J. Madden

High Cellular Reaction in Cerebrospinal Fluid in Brain Tumors Dr. H. R. Merwarth

Studies in Cardio-Vascular Syphilis
Drs. E. P. Maynard, Jr., J. A. Curran, I. T. Rosen

X-Rays as an Aid in the Diagnosis of Pneumonia in Children Dr. A. D. Smith

There were twenty-five members present when the annual business meeting was called to order by the president, Dr. Jacques Rushmore. Dr. Fett, Chairman of the membership committee, proposed for membership two candidates, Dr. Edward M. Douglas, 9017 153rd Street, Jamaica, L. I., and Dr. David F. O'Keefe, Jackson Height, L. I., and they were duly elected. Dr. Ross, Chairman of the Publication Committee, reported that the exchanges of the *Medical Times and Long Island Medical Journal* were so widely scattered in foreign countries that to have an article published in the journal was tantamount to distributing it to the far corners of the earth. The treasurer, Dr. John L. Bauer, reported that while we had 507 members whose dues were paid up through 1932, there were 88 whose dues for 1931 were unpaid. A motion was passed to refer this matter to the executive committee for action. The president appointed two auditors, Dr. McKenna and Dr. Fett, to examine the records in accordance with custom. After conferring with the treasurer, and anticipating cutting the expenditures to the minimum, it was discovered that the dues could be made lighter. The dues for 1933 are therefore reduced to only three dollars.

In the election which followed, these members were chosen:
President—Dr. William J. Malcolm of Jericho.
First V. Pres.—Dr. Gordon Gibson of Brooklyn
Second V. Pres.—Dr. George H. Schenck of Southampton.
Third V. Pres.—Dr. Joseph S. Thomas of Flushing.
Fourth V. Pres.—Dr. Herbert C. Fett of Brooklyn.
Treasurer—Dr. John L. Bauer of Brooklyn.
Secretary—Dr. David Edward Overton of Hempstead.

The annual dinner took place in the Granada Hotel on Lafayette Avenue at Ashland Place at 6:30 P. M. Over forty men gathered for the dinner, in testimony of their gratitude for Dr. Jacques Rushmore's worthy efforts during his year as president. Dr. Rushmore gave the association a new impetus when he organized a practical method of making the books of Kings County Medical Library available to the members.

We are deeply indebted to the speaker of the evening, Dr. Eric Stone, who journeyed down from Providence, R. I., to tell us the extremely interesting story which he has dug up from the records of the American Indian. Dr. Stone is a urologist whose hobby has been delving into the medical lore of the Indian, and he is the author of "Medicine Among the American Indians", published by Paul Hoeber in the Clio Medica series. His address was illustrated by lantern slides, many of which were reproduced from drawings of his own making, and it evoked interesting discussion. Dr. Harlow Brooks, who was present as a guest, and who is known as a writer on this same subject, and Dr. Henry P. de Forest, a member, told timely anecdotes about American Indians. The members were enthusiastic in their praise of Dr. Stone's cultural presentation of this historical contribution to medicine.